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Republic of Suriname

The Republic of Suriname’s First National Adaptation Plan Progress Report

Republic of Suriname | April 2025

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Cover photo: Ministry of Spatial Planning and Environment

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About the NAP Global Network

The NAP Global Network was created in 2014 to support developing countries in advancing their NAP processes and help accelerate adaptation efforts around the world. To achieve this, the Network facilitates South–South peer learning and exchange, supports national-level action on NAP formulation and implementation, and develops analysis, communications, and knowledge products. The Network's members include individual participants from more than 150 countries involved in developing and implementing National Adaptation Plans, as well as 11 donor members. Financial support for the Network has been provided by Austria, Canada, Germany, the United Kingdom, and the United States. The Secretariat is hosted by the International Institute for Sustainable Development (IISD). For more information, visit www.napglobalnetwork.org.

NAP Global Network

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Executive Summary

This national adaptation plan (NAP) progress report outlines the country’s achievements and challenges in climate change adaptation efforts from 2020 to 2024. Covering the first 3.5 years of NAP implementation since its submission to the United Nations Framework Convention on Climate Change (UNFCCC), the report supports policy-makers in understanding ongoing adaptation activities and identifies areas for improvement.

The NAP is built on the National Climate Change Policy, Strategy, and Action Plan for Suriname 2014–2021 and the National Development Plan 2017–2021. The NAP 2019–2029 prioritizes water, energy, forestry, and agriculture sectors for near-term adaptation, while mining, tourism, infrastructure, and housing are prioritized for medium-term adaptation. Crosscutting sectors such as education, health, environment, disaster risk reduction, and spatial planning span the full implementation period, supporting resilience across productive sectors. The NAP comprises 133 adaptation measures, of which 57 are at the strategic level and 76 at the sectoral level.

Progress was assessed using Suriname’s monitoring and evaluation framework, by comparing actual progress against anticipated outcomes via key performance indicators in the priority sectors for the first phase (near term). Information for this progress report was collected through simplified questionnaires, focus group meetings, interviews, and a validation workshop.

Suriname made notable achievements particularly in forestry, environment, and spatial planning. These achievements include the enactment of the Environmental Framework Act in 2020, the operationalization of the National Environmental Authority, the development of a draft Law on Spatial Planning with land-use planning standards and guidelines, a vision on spatial planning, and the establishment of forest emissions reference levels.

Implementation of the NAP experienced some challenges as no formal coordinating entity is responsible for its implementation and most of the stakeholders were not aware of the NAP. Also, financial constraints and a lack of human and technical capacity affected the NAP’s implementation.

Strengthening coordination, ensuring adequate financial and human resources, and actively engaging vulnerable groups, including Indigenous and Maroon communities, are essential for sustained progress and to build Suriname’s resilience against climate change.

This progress report also includes recommendations for each sector to enhance future efforts and a list of stakeholder needs in Appendix F.

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List of Abbreviations

ACTO	Amazon Cooperation Treaty Organization
AdeKUS	Anton de Kom University of Suriname
BOG	Bureau Public Health
CELOS	Center for Agricultural Research in Suriname
COP	Conference of Parties
CSF	climate-smart forestry
CUBiC	Caribbean Uniform Building Code
DRR	disaster risk reduction
EAS	Energy Authority Suriname
EBS	Energy Company Suriname
EIA	Environmental Impact Assessment
EnGenDER	Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean
FAO	Food and Agriculture Organization
FPIC	Free, Prior, and Informed Consent
FREL	Forest Reference Emission Level
GCCA+	Global Climate Change Alliance Plus Initiative
GCF	Green Climate Fund
GDS	Green Development Strategy
GEF	Global Environment Facility
GHFS	Green Heritage Fund Suriname
GRID-IP	Greening Transportation Infrastructure Development Integrated Program
IDB	Inter American Development Bank
IICA	Inter-American Institute for Cooperation on Agriculture
IWRM	Integrated Water Resource Management
KAMPOS	A collaboration of Tribal People in Suriname consisting of the Kwinti, Aluku, Matawai, Paamaka, Okanisi, and Saamaka
KPI	key performance indicator
LVV	Ministry of Agriculture, Livestock, and Fisheries
M&E	monitoring and evaluation
MDS	Meteorological Service Suriname

MINOWC	Ministry of Education, Science and Culture
MoU	memorandum of understanding
NAP	national adaptation plan
NC3	Third National Communication
NCCPSAP	National Climate Change Policy, Strategy and Action Plan for Suriname 2014–2021
NCCR	National Coordination Center for Disaster Management
NDC	nationally determined contribution
NGO	non-governmental organization
NH	Ministry of Natural Resources
NIMOS	National Institute for Environment and Development in Suriname
NMA	National Environmental Authority
NOP	National Development Plan
PAHO	Pan American Health Organization
REDD+	Reducing emissions from deforestation and forest degradation in developing countries
ROM	Ministry of Spatial Planning and Environment
SBB	Foundation for Forest Management and Production Control
SFM	Sustainable Forest Management
SMIN	Suriname Environment Information Network
SMNR	Master of Science Programme in Sustainable Management of Natural Resources
SPWE	Foundation for Productive Work Units
SWM	Suriname Water Company
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNFCCC	United Nations Framework Convention on Climate Change
VIDS	Association of Indigenous Village Leaders in Suriname
WHO	World Health Organization
WLA	Hydraulic Research Department
WWF	World Wildlife Fund

1. Introduction

1.1 Suriname's National Adaptation Plan

In June 2020, Suriname submitted its national adaptation plan (NAP) 2019–2029 to the United Nations Framework Convention on Climate Change (UNFCCC). Suriname's NAP is designed to help the country develop "comprehensive medium and long-term climate adaptation planning through two overarching goals:

1. Impact reduction through adaptation and resilience building, and
2. Integration and mainstreaming in a coherent manner, into relevant new and existing policies, programs, activities, and development planning processes and strategies, across multiple sectors and levels as appropriate" (Government of Suriname, 2019, p. 21).

The overall direction for Suriname's climate change adaptation endeavours is outlined in the NAP, which builds upon the National Climate Change Policy, Strategy, and Action Plan for Suriname (NCCPSAP) 2014–2021, and also encompasses additional sectoral, governmental, and stakeholder plans. The NAP addresses adaptation at two levels: strategically at the national level to enhance efforts comprehensively, and within prioritized economic sectors based on climate risk and vulnerability assessments (Government of Suriname, 2019). The NAP specifies actions that align directly with the eight guiding principles[1] that form the basis of Suriname's climate-related policy positions. The NAP comprises a total of 133 adaptation measures, of which 57 are at the strategic national level and 76 at the sectoral level, to be implemented by 2029. Implementation of the NAP is divided into three phases, namely the near term (years 1–3), medium term (years 3–6), and long term (years 7–10).

The water, energy, forestry, and agriculture sectors have the most vulnerable risk profiles and are priority sectors for the near term. The mining, tourism, infrastructure, and housing sectors have less vulnerable risk profiles and are the next priority sectors for the medium term. The environment, disaster risk reduction (DRR), spatial planning, education, and health sectors play crucial roles in developing climate resilience in the productive sectors. Currently, only the water sector has a sectoral adaptation strategy and action plan that builds on the objectives and outcomes as outlined in the NAP for this sector.

The Government of Japan provided support for the NAP process in Suriname through the Japan Caribbean Climate Change Partnership (n.d.), an initiative of the United Nations Development Programme (UNDP). The development of the NAP followed the extensive guidelines provided by the UNFCCC. Data and information were collected from various stakeholders through national workshops and consultations with experts from relevant ministries, institutions, and organizations and representatives from the Indigenous and Maroon communities to prioritize sectors for climate change adaptation.

[1] The policy principles are participation, information and reporting, public-private partnerships, technology and innovation, legislation, commitment of resources, science-based decision making, and minimizing risk and maximizing opportunities (Government of Suriname, 2019).

A framework for monitoring and evaluation (M&E) has been established for Suriname's NAP with an operational mechanism for M&E at the strategic and sectoral levels (Government of Suriname, 2019).[2] According to the NAP, the National Institute for Environment and Development in Suriname (NIMOS) is the technical body responsible for implementing the NAP, together with relevant ministries. A dedicated office would be established to collect relevant information and data on national and regional levels, which would be used to develop environmental policy and plans (Government of Suriname, 2019). However, NIMOS has not fulfilled its role as the national focal point for implementation of the NAP. The institute was focused on its core tasks and on approval of the Environmental Framework Act, which was needed for its transition into the National Environmental Authority (NMA).[3] ROM took the lead in NAP implementation from 2020, and NIMOS became the NMA in July 2024. The NMA provides support and advises the Minister of Spatial Planning and Environment by facilitating structured consultations with ministries and other governmental entities to ensure efficient and effective coordination of environmental policy. The NMA is authorized to request information from government bodies, businesses, and organizations concerning their activities that have a substantial impact on the environment. It is currently unclear whether ROM will continue to serve as the coordinating entity for NAP implementation, or if the NMA will take over the responsibility. The future of NAP implementation and the coordinating entity have not yet been discussed.

1.2 Suriname's Climate Change Policy

Suriname's NAP builds on the National Development Plan (NOP) 2017–2021 and the NCCPSAP 2014–2021, and is informed by Suriname's obligations under the Paris Agreement. The NAP, in turn, informs Suriname's Multi Annual Development Plan 2022–2026, its nationally determined contribution (NDC), and its Environmental Policy Plan 2024–2028.These plans and their relationships to the NAP are discussed in more detail in this section.

On April 22, 2016, Suriname signed the Paris Agreement, joining the global effort to limit the rise in global temperature to well below 2°C above pre-industrial levels, and preferably below 1.5°C (UNFCCC, 2016). According to Article 104 (1) of Suriname's Constitution, all agreements must be submitted to the Parliament for approval. The Paris Agreement law was decisively approved on June 26, 2018 (De Nationale Assemblee, 2018).

The NAP builds on and informs various policy documents, which are discussed briefly in this section. The NAP is based on the NOP 2017–2021 which was prepared by the National Planning Office Suriname. In accordance with Article 40 of the Constitution, a Development Plan must be adopted by law every 5 years, taking into account the government's national and socio-economic objectives. Development Plans are submitted to the Parliament for discussion and approval. The NOP 2017–2021 has two main goals: to enhance the nation's capacity for development, and to achieve sustainable

[2] The M&E framework outlines the requirements and responsibilities for monitoring and evaluating the NAP, as well as using M&E results for current and future NAP planning and implementation processes.

[3] The NMA is a government body responsible for planning, formulating, evaluating, and monitoring the implementation of environmental policy, as well as providing advice and collecting and exchanging information regarding the natural and human environments.

development by integrating economic and social development in a way that is consistent with environmentally responsible practices and guarantees that current growth does not impede or prevent future development opportunities. The NOP 2017–2021 is built on four pillars, with the fourth pillar focused on the utilization and protection of the environment, taking into account the impact of climate change into the country's development (Government of Suriname, 2017). The NOP 2017–2021 was followed by the Multi-Annual Development Plan 2022–2026, which outlines a strategy for the Government of Suriname to achieve just and sustainable development that is both financially realistic and implementable in order to respond to opportunities and threats like globalization and climate change. The Multi-Annual Development Plan consists of policy areas with short- and long-term objectives in which the 17 UN Sustainable Development Goals are integrated. This Development Plan also acknowledges climate change in its strategic environmental planning.[4]

The Environmental Policy Plan 2024–2028 of the Ministry of Spatial Planning and Environment outlines strategies and objectives to collectively work toward a healthy and livable environment for current and future generations. The objective with regard to climate change is to strengthen the country's resilience to its effects and to sea level rise, and to reduce emissions of greenhouse gases. The Environmental Policy Plan 2024–2028 outlines seven strategic objectives and related activities, including enhancing resilience to the effects of climate change; strengthening legislation, regulations, and enforcement; strengthening institutions; enhancing national environmental awareness; integrating environmental data management; promoting and consolidating research partnerships; and mobilizing capital. The document highlights which strategic components can be accomplished by 2028 and provides a roadmap for achieving annual results through the implementation of the NAP.

In 2019, Suriname submitted its NDC for the period 2020–2030 to the Secretariat of the UNFCCC (UNFCCC, n.d.)**.** The NDC is a strategic document that outlines the country's climate actions and takes into consideration the NAP's adaptation measures for the priority sectors. The NDC includes the following actions to address the transport, energy, forestry, and agriculture sectors (Cabinet of the President, 2019):

- **transport**: improve road and drainage infrastructure such as sea defence infrastructure; upgrade roads and canals; update the Transport Master Plan; and introduce vehicle emissions controls
- **energy**: adopt the Renewable Energy Act; implement fiscal sustainability measures to promote energy-efficiency investments; develop and adopt energy-efficiency standards; and invest in expansions of both grid-connected and off-grid capacity
- **forestry**: diversify the forests; ensure sufficient capacity to implement forest monitoring, control, enforcement, and strengthening of forest regulatory and supervisory institutions; maintain forest resources to contribute to economic development; and improve institutional arrangements to promote sustainable practices in other land-use sectors

[4] With regard to adaptation to climate change, the Multi-Annual Development Plan identifies several strategic action points: to convert the NDC in concrete projects, set up an ocean measuring station on the coast, and approve the Nature Protection Act.

- **agriculture**: rehabilitate and enhance infrastructure such as dikes and river defences; improve water resource management; promote sustainable land management; apply innovative technologies in land use; introduce a national land-use planning system; implement a national research, development, and innovation program; and strengthen agricultural research sector

The NAP is built on the NCCPSAP 2014–2021, which encompassed the sectors[5] of the NOP 2012–2016. The NCCPSAP included a National Climate Change Policy consistent with Suriname's NOP 2012–2016, a National Climate Change Strategy, and a Plan describing programs and actions for each NOP theme (Caribbean Community Climate Change Centre and the Directorate for Environment, Ministry of Labour, Technological Development and Environment, 2015). The strategy presented a climate change development roadmap for the periods 2014–2016, 2017–2021, and 2022–2026. The implementation of the NCCPSAP was delayed due to a change in government in 2015. This change led to the transfer of the coordination of environmental policy from the Ministry of Labour, Technological Development and Environment to the Coordination Environment within the Office of the President. Coordination Environment's budget came from the Ministry of Home Affairs. Subsequently, the Ministry of Labour, Technological Development, and Environment became the Ministry of Labour. In 2023, preparations were made by ROM to update the NCCPSAP. However, it was subsequently decided to use the available funds to instead develop Suriname's Green Development Strategy.

Source: Ministry of Spatial Planning and Environment.

[5] The sectors included in the National Development Plan 2012–2016 were infrastructure, energy, drinking water, housing, mining, tourism, education, health, DRR, spatial planning, environment, sustainable forest management, and agriculture, livestock, and fisheries.

1.3 Purpose of the NAP Progress Report

Monitoring and reporting progress is essential for the NAP process as it enables consistent tracking and improvement of adaptation planning and implementation. Progress reports help in building capacity, identifying successes and challenges in NAP implementation, and fostering a learning environment for continual improvement (Guerdat et al., 2023).

According to Decision 5/CP.17 Annex, para.6, Parties to the UNFCCC “should undertake a regular review, at intervals that they determine: (a) to address inefficiencies, incorporate the results of new assessments and emerging science and reflect lessons learned from adaptation efforts; (b) to monitor and review the efforts undertaken, and provide information in their national communications on the progress made and the effectiveness of the national adaptation plan process” (UNFCCC, 2011, p. 86).

The findings in this report will be useful in preparing the adaptation chapters of Suriname’s First Biennial Transparency Report and the Fourth National Communication to the UNFCCC, as well as the Third NDC. This will improve consistency in the country’s reporting to the UNFCCC.

The purpose of this NAP progress report is to assess the implementation of the NAP at the national level, as well as at the sectoral level for priority sectors, during the first phase of NAP implementation between 2020 and 2024. Challenges encountered by sectors in implementing the adaptation measures are also identified. This assessment attempts to identify the capacity needs of each sector for implementing the adaptation measures in the NAP, as well as priorities for action and funding.

This NAP progress report will support the Government of Suriname to achieve the following objectives:

- track the implementation status of NAP adaptation measures
- identify challenges, gaps, and lessons learned concerning the implementation of the NAP
- make recommendations for implementing priority adaptation measures and funding

2.0 Approach Used to Monitor and Assess Suriname's NAP

2.1 Methodology

The development of this report has been informed by the guidance published by the NAP Global Network on reporting on progress in NAP processes (Guerdat et al. 2023), as well as the NAP progress reports of St. Lucia and Albania, which are similar in scope and purpose. The methodology also takes into consideration Suriname's national circumstances and lessons learned from past experiences.

This progress report uses the following methodology:

- A **review of available documents** relevant to implementing the NAP and guidelines for NAP progress reporting was conducted. Appendix A includes the list of documents reviewed.
- A **questionnaire** was developed to gather specific information from relevant stakeholders in September 2024. The template for the questionnaire is included in Appendix B. Out of the 62 stakeholders that were invited to take part in the online questionnaire, only 8 responses were received. To obtain relevant information, additional questions were sent to those eight respondents.
- Two **focus group meetings** were organized, which were attended by 27 stakeholders. The objectives of these meetings were to inform stakeholders of the objective and importance of the progress report and the methodology used to prepare the report, and to collect information from the participants regarding the progress made in implementing adaptation measures and projects and the challenges they have encountered. The meetings provided relevant information for the NAP progress report based on the priority sectors of water, energy, forestry, and agriculture, as well as the crosscutting sectors of health, education, DRR, environment, and spatial planning. The agenda and stakeholders list for the focus group meetings are included in Appendix C.
- **Interviews** were conducted with key stakeholders to gather additional information, including those who were unable to attend the focus group meetings. These interviews were conducted between August 19 and September 30, 2024. A list of stakeholders interviewed is included in Appendix D.
- A **validation workshop** was organized on October 11, 2024, to present the findings of the progress report and provide stakeholders with the opportunity to share additional input to the report. A total of 31 stakeholders attended the validation workshop. The registration list is included in Appendix E.

An M&E framework has been established for the NAP to provide a comprehensive overview and operational mechanism for M&E at both the strategic and sectoral levels (Government of Suriname, 2019). As mentioned in section 1.1, ROM oversees the implementation of the NAP. Prior to the commissioning of this progress report, an international consultant was hired in 2023 to support ROM to assess which adaptation measures as outlined in the NAP have been implemented. As part of this prior assignment, a questionnaire was developed to determine the status of NAP implementation. The questionnaire was distributed to stakeholders across the various sectors (energy, forestry, mining, tourism, water, and agriculture, livestock, and fisheries). However, few responses to the questionnaire were received, and the period for submitting feedback was not extended. It is uncertain how the feedback received from stakeholders was used. In conjunction with the low response rate to the questionnaire developed for this progress report, this past result suggests gaps in capacity related to engagement on NAP implementation that could be addressed to improve future progress reporting.

To develop the NAP Progress Report, information was gathered from the literature review and from stakeholders during the focus group meetings, interviews, and workshop. NAP implementation progress was assessed against the M&E framework by comparing apparent actual progress against anticipated progress as indicated by the M&E framework's key performance indicators (KPIs) for the initial 3.5-year period from 2020 to 2024. It should be noted that the NAP does not include KPIs or an achievement schedule for the infrastructure, housing, tourism, and mining sectors. This report assesses only progress made in the priority sectors for the first phase (near term). Obtaining information regarding progress made on particular strategic objectives, adaptive measures, or KPIs was occasionally challenging. In these cases, the report includes details regarding relevant activities or initiatives that might result in the indicative outputs as outlined in the NAP. Where information was not available or could not be validated, the progress of implementation was categorized as unclear.

2.2 Criteria Used During the Assessment

Criteria were developed to assess progress in the implementation of Suriname's NAP based on the publication *Reporting on Progress in National Adaptation Plan Processes* (Guerdat et al., 2023). These criteria are detailed in Table 1. The questions associated with the criteria have been tailored to reflect the scope and purpose of this assignment, and an additional criterion has been included to capture the *extent of implementation* of actions specified in the NAP. Under this criterion, an assessment was conducted to determine if the adaptation measures specified in the NAP are completed, ongoing, not started, or unclear.[6] Additionally, any available information regarding achievements (highlights to date) and challenges encountered has been included, as detailed in the following sections.

Evaluating the effectiveness of the NAP will support the Government of Suriname to understand if the implemented activities have achieved their objectives. However, an assessment of the effectiveness of adaptation measures implemented under the NAP, many of which have not been fully implemented, is beyond the scope of this assessment.

[6] Where information was not available or could not be validated, the progress of implementation was categorized as unclear.

Table 1. Criteria for assessing progress in the implementation of Suriname's NAP

Criteria	Question
Extent of implementation	What specific adaptive measures as outlined in the NAP have been completed? Which measures are ongoing or not yet completed? What are the major achievements within each sector that can be highlighted?
Institutional capacity	What capacities do the stakeholders have in responding to climate change risks (implementing adaptation measures; are sufficient financial resources available to adequately implement the adaptation measures)?
Barriers	What are the barriers that the stakeholders have encountered in implementing the adaptation measures (legal, information, cooperation, finance, technical capacity)?
Stakeholder participation	How have stakeholders been involved in the implementation of the NAP? Has gender been integrated in the implementation of the NAP?
Collaboration of actors	How well are different sectors coordinating their efforts to implement adaptive measures of the NAP? What is the focus of the collaboration and what method is used?
Lessons learned	What are the lessons learned from the implementation? Are there best practices that can be replicated?

Source: Adapted from Guerdat et al., 2023.

Source: IICA Suriname.

3.0 Suriname's NAP Progress

The findings presented in this chapter were compiled from a review of relevant literature and documentation, as well as feedback from stakeholders during the focus group meetings, the online questionnaire, and interviews. During the focus group meetings, there was a brief exercise to determine who has been involved in the development and implementation of the NAP. Out of the 27 stakeholders, 5 were involved in the development of the NAP and are aware of it. Even though other stakeholders were able to provide information on adaptation efforts that have been undertaken or are ongoing, many are not directly involved in the implementation of the NAP. From the online questionnaire, it was clear that only one out of the eight respondents was involved in the development of the NAP. The same exercise during the validation workshop showed that of the 31 stakeholders, 4 were involved in the development of the NAP and 8 were aware of it. It should be noted that some stakeholders who were present at the validation workshop did not attend the focus group meetings.

3.1 Overview of Strategic Progress

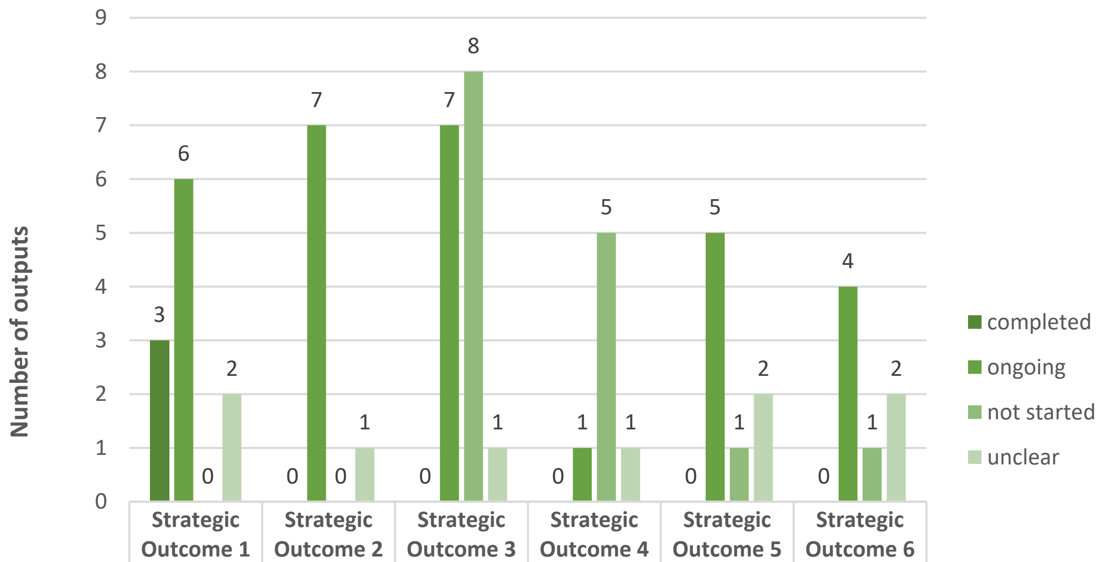
As mentioned in the previous chapter, Suriname's NAP contains strategic and sectoral objectives along with KPIs and an achievement schedule. At the strategic level, the NAP identifies six strategic priority outcomes, 57 associated adaptation measures, and 122 outputs.

The strategic outcomes outlined in the NAP are as follows (Government of Suriname, 2019, pp. 47–56):

- institutional arrangements, policies, and capacities able to lead and coordinate national and sub-national climate change adaptation;
- data and information collection systems to fully support national and sub-national climate change impacts, vulnerability and adaptation decision making;
- the integration and institutionalization of climate change adaptation in broader Surinamese economic development policies, plans, and programs;
- national technical capacity that is fully trained and skilled at leading and implementing Suriname's climate change adaptation actions;
- climate change adaptation that respects Surinamese values and culture and reduces gender and other social inequities; and
- identify and access financing and investment especially for innovation-driven climate change adaptation technologies.

This assessment focused on the priority objectives and adaptation measures identified in the M&E framework of the NAP. These are included in the achievement schedule for the short term (0–3 years) and medium term (4–7 years). At the strategic level, Suriname has made some progress in implementing adaptation measures, as outlined in the NAP, or adaptation projects between 2020–2024 (see Figure 1). Most progress has been made in strategic outcomes 1 and 2. The least progress has been made in strategic outcomes 3 and 4. Figure 1 provides an overview of the strategic outcomes of the NAP and the number of outputs that have been completed, are ongoing, have not started, or which have no information available to validate.

Figure 1. Progress in NAP implementation at the strategic level, showing the number of outputs at different stages of implementation for each strategic outcome



	Strategic Outcome 1	Strategic Outcome 2	Strategic Outcome 3	Strategic Outcome 4	Strategic Outcome 5	Strategic Outcome 6
completed	3	0	0	0	0	0
ongoing	6	7	7	1	5	4
not started	0	0	8	5	1	1
unclear	2	1	1	1	2	2

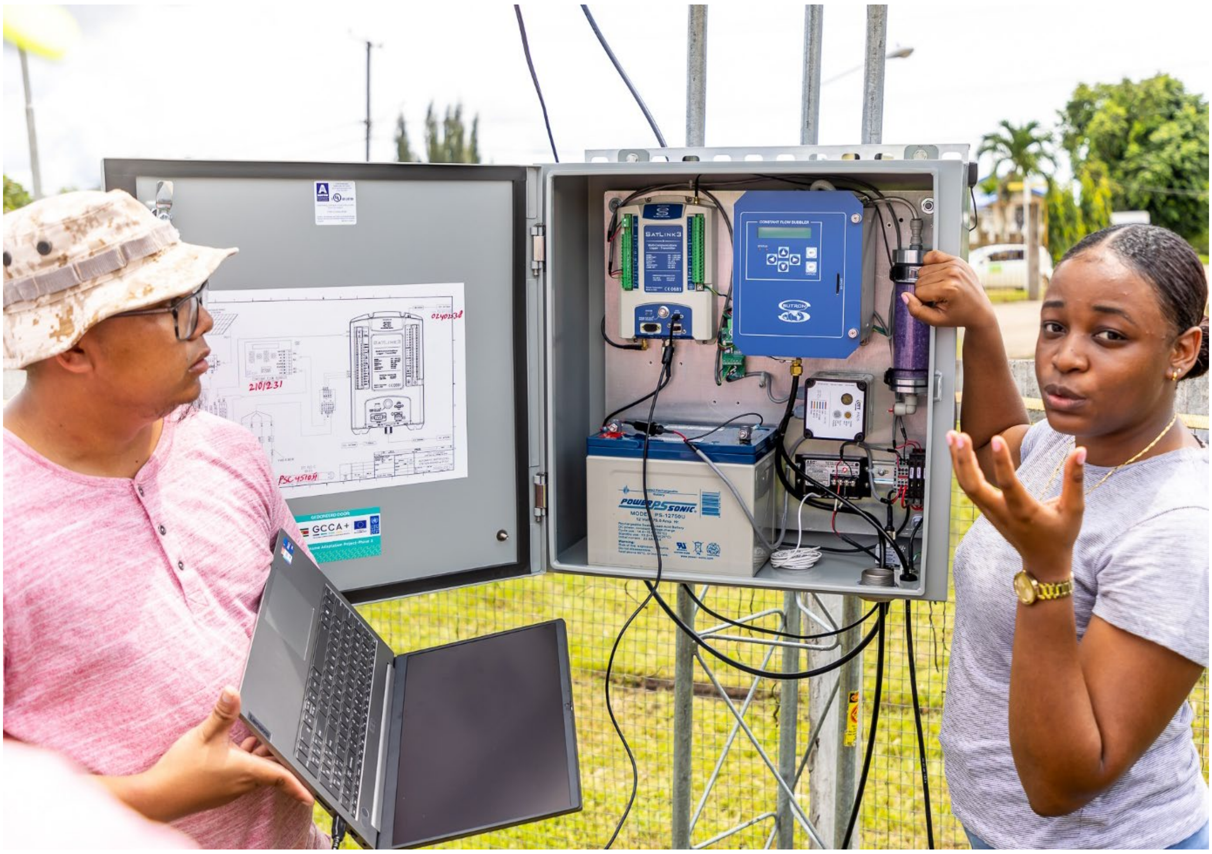
Strategic outcomes

Note: “Unclear” indicates that insufficient information was available to determine a measure’s status.
Source: Based on data from stakeholder interviews and focus group meetings conducted in September–October 2024.

One of the biggest steps the country has made is the approval of the Environmental Framework Act in 2020, which was developed and submitted for approval by Parliament in 2000. The Hydraulic Research Department (WLA) and Meteorological Service Suriname (MDS) are now more equipped to collect relevant water and weather data that can be used to make forecasts or prognoses which can contribute to policy-making.

A major challenge that has impacted the implementation of the NAP has been the COVID-19 pandemic. The NAP was finalized in 2019 but was not submitted to Parliament for approval. As mentioned in chapter 1, there is no formal coordinating entity for NAP implementation. ROM took the lead in NAP implementation in 2020, but it had also just been established in 2020 and didn’t have the necessary capacity to evaluate and monitor NAP implementation. During the consultations, the majority of the stakeholders were unaware of the document and their role in its implementation. The NAP also doesn’t include a financial plan. Each ministry has its own budget, but there is no dedicated budget or budget line for climate change activities. ROM also has its own budget, but the funds are not sufficient to implement adaptation measures.

Based on the identified KPIs as outlined in the NAP (Government of Suriname, 2019), the progress made per strategic outcome is emphasized and can be summarized as follows:



Staff of the WLA demonstrate the installation and maintenance of Hydro-Met equipment at the Ministry of Public Works, to enhance technical knowledge and operational skills. Source: GCCA+ Phase 2.

Strategic outcome 1: Institutional arrangements, policies, and capacities able to lead and coordinate national and sub-national climate change adaptation.

- The Environmental Framework Act was approved in the Parliament on March 26, 2020, and came into effect on May 15, 2020. Since the Act’s approval, the NIMOS[7] now serves as the NMA, which was officially established on July 26, 2024 (ROM, 2024). The Environmental Framework Act, among others, outlines the tasks and mandate of the NMA, which include requesting information from government authorities, companies, and organizations relating to activities that may have an impact on the natural environment (De Nationale Assemblee, 2020). With the transformation to the NMA, relevant ministries will have a role in contributing in national reporting and in providing relevant data.
- The Suriname Environment Information Network (SMIN) was established in June 2017 as one of the outputs of the Cross-Cutting Capacity Development project. A climate database, DONDRU, was established in 2022 and is the property of ROM, though it is managed by the NMA. This activity also relates to strategic outcome 2 regarding data and information systems.
- ROM is collaborating with other ministries to execute climate-related projects.

[7] NIMOS was established on March 15, 1998, as the executive body of the National Environmental Council (https://nimos.org/en/about-1/).

- Within the Climate Change Unit of ROM, staff are responsible for climate change data management (data collection, storage, and sharing). It is unclear if the NMA has a dedicated office for data and information collection to promote adaptation and mitigation mainstreaming.
- In 2024, ROM started the process to request that ministries and institutions provide necessary data for future national reporting such as for Suriname's Fourth National Communication to the UNFCCC and First Biennial Transparency Report.

Strategic outcome 2: Data and information collection systems to fully support national and sub-national climate change impacts, vulnerability, and adaptation decision making.

- WLA and MDS of the Ministry of Public Works received Hydro-Met equipment to improve forecasting and modelling of impacts of slow-onset environmental hazards, as well as data modeling of climate change scenarios and impacts. With support from the Global Climate Change Alliance Plus Initiative (GCCA+) phase 2 project, WLA has received and setup nine automatic stations and 15 EcoLog and MultiLog stations[8] to collect data on water levels and water quality. Within GCCA+ phase 1, MDS received and setup four automatic rain stations and two automatic weather stations. In phase 2, it received and set up an additional three automatic weather stations and 15 automatic rain stations. Currently, a total of 19 automatic rain stations and 17 automatic weather stations are spread over Suriname in accordance with World Meteorological Organization guidelines. The majority of the stations are located north of the Prof. Dr. Ir. W.J. van Blommestein Meer (Brokopondo Reservoir) (T. Warsodikromo, personal communication, September 12, 2024). Using these stations, WLA and MDS can provide timely warnings of climate hazards and disaster risks, predict water discharges for water resource management, provide support to other sectors, and effectively manage weather-, water-, and climate-related risk assessments (UNDP, n.d.).
- The General Bureau of Statistics publishes environmental statistics, including demographic and socio-economic data, as well as information on climate and natural disasters, the environment, and health. The Environmental Statistics Report monitors the environmental state and trends and supports public awareness on the environment. The most recent (11th) Environmental Statistics Report is from December 2024. Furthermore, Suriname's First Climate Change Statistics and Indicators Report was published in 2023, based on the global set of climate change statistics and indicators.
- Within the SMIN, as mentioned in strategic outcome 1, the climate database DONDRU[9] was established. The Ministry of Spatial Planning and Environment, with financial support from the Inter-American Development Bank (IDB), launched the DONDRU database on June 10, 2022. DONDRU is a central platform for collecting and disseminating climate change–related information in Suriname. To date, a memorandum of understanding (MoU) has been signed with the National Herbarium of Suriname and the National Zoological Collection of Suriname to ensure continued data exchange on the country's flora and fauna and integration and

[8] The EcoLog measures temperature, relative humidity, barometric pressure, sound level and light level. The MultiLog is based on the MultiLog professional data logger to perform long term logging of weather data.

[9] https://dondru.sr/

publication through SMIN and the Global Biodiversity Information Facility. Procedures and protocols for data production and data dissemination at the national level and through Global Biodiversity Information Facility have been prepared. Data managers received training on data mobilization and also took part in the DataCamp Training "Career Track Data Analyst with R." The intention was that MoUs would be signed between the NMA and the institutions who will submit relevant climate data and information (Global Biodiversity Information Facility, n.d.). The DONDRU database does not include current information, with the most recent data being from 2020. It is also unclear whether the NMA has signed MoUs or information-sharing protocol agreements with other institutions, such as General Bureau of Statistics, Foundation for Forest Management and Production Control (SBB), MDS, and WLA.

Strategic outcome 3: Integration and institutionalization of climate change adaptation in broader Surinamese economic development policies, plans, and programs.

- There is currently no alignment of climate-related implementation between the ministries. ROM has developed a National Environmental Plan 2024–2028 for approval by Parliament.
- A National Green Development Strategy (GDS) has been developed and includes some initiatives regarding climate adaptation and mitigation.
- Most of the staff from the NMA and ROM are relatively new and are trained in adaptation-related topics and issues. More experienced staff involved in developing the NAP have left the organization.
- ROM is making preparations to establish a committee or working group to support the Ministry in monitoring its climate change activities and projects. A representative from the private sector will also be included. To prepare previous national communications to the UNFCCC, a Project Steering Committee was established to provide strategic policy guidance and ensure that the national communications are in line with national policy goals and developments, as well as to oversee project implementation.
- Local communities and Indigenous and Maroon representatives engaged in project formulation and implementation (such as sustainable forest management [SFM], climate-smart agriculture, and mangrove planting). In October 2023, the Government of Suriname and the Amazon Cooperation Treaty Organization (ACTO) initiated a project to use a collective incentive funding mechanism to restore, protect, and conserve the mangroves. The project also involves the participation of a group of women from local communities whose livelihoods are primarily connected to these coastal ecosystems (ACTO, 2023).
- For each budget year, every ministry submits its plan and related budget, which is then included in the State Budget that is presented to and approved in Parliament. The M&E framework has been established to assess how the country is progressing in its implementation of the adaptive measures of the NAP and this framework can also be used to make the necessary improvements.

Strategic outcome 4: National technical capacity that is fully trained and skilled at leading and implementing Suriname's climate change adaptation actions.

- Representatives from Energy Company Suriname (EBS), Energy Authority Suriname (EAS), Anton de Kom University of Suriname (AdeKUS), Ministry of Agriculture, Livestock, and Fisheries (LVV), SBB, Ministry of Public Works, and the Center for Agricultural Research in Suriname (CELOS) participated in a training course in 2023 regarding the costs of adaptation measures and climate resilience infrastructure.
- A workshop was held in October 2024 in the framework of the Enhancing Ecosystems and Coastal Protection for Climate Change Resilience in the Caribbean (ECP-Caribbean) project in Suriname. The Caribbean Community Climate Change Centre (CCCCC) will carry out this project in collaboration with national executing partners. This project aims to increase awareness of the differences in vulnerability between men and women as a result of climate change by providing training, capacity building, and technical assistance for restoration, repopulation, rehabilitation, and management of coastal ecosystems.
- In 2022, a capacity needs assessment was conducted as part of the Third National Communication (NC3) project to identify the capacity needs of the various stakeholders in preparing national reports based on the lessons learned in preparing national communications. Furthermore, a training and capacity plan was developed during the NC3 project to meet the national and UNFCCC requirements for each sector at both organizational and individual levels.
- Staff from ROM and the NMA, as well as local independent experts, have been trained on relevant sectors and topics, such as the use of the Climate Change Online Risk and Adaptation Tool, cost provision adaptation measures, Green Climate Fund (GCF) processes, and climate-resilient infrastructure. The training activities were part of ongoing projects and financed through donor resources.
- Within the budget of ROM, no budget has been allocated specifically for training on climate adaptation. Also, there have been no discussions between the Ministry of Education, Research and Culture (MINOWC) and ROM regarding training at the ministerial level on climate adaptation. The Foundation for Productive Work Units (SPWE) and Foundation for Labor Mobilization and Development are two departments of the Ministry of Labour, Employment and Youth Affairs (SPWE, Foundation for Labor Mobilization and Development, n.d.). With an emphasis on entrepreneurship, SPWE offers training in administration, finance, logistics, marketing, management, communication skills, entrepreneurship, and technical skills, and is more focused on entrepreneurs. The Foundation for Labor Mobilization and Development provides vocational training to school leavers from the age of 16. All government employees have access to the training that SPWE offers. However, no specialized courses on climate adaptation or environment are offered.
- Between 2020 and 2024, personnel with backgrounds in environmental science have been recruited at ROM for the various thematic policy areas. No human resource plans for climate action have been developed.

Strategic outcome 5: Climate change adaptation that respects Surinamese values and culture and reduces gender and other social inequities.

- The participation of women and women's organizations in training and workshops is visible. However, members of vulnerable communities, groups, and populations, including Indigenous People, older adults, youth, etc., are not yet actively and consistently participating and therefore visible in decision-making processes, despite some involvement in individual projects.
- With regard to the output "increased participation in adaptation programming by a wide cross-section of the business and industry/private sector community" as stated in the NAP, the Social Economic Council is also included in decision-making processes. With the Climate Committee or Working Group that will be established to support ROM in climate change projects and activities, the private sector will also be included.
- Within the National Budget, no specific budget line is allocated for implementation, coordination, monitoring, and capacity-building activities related to gender within ministries. Within the Enabling Gender-Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean (EnGenDER) project and reallocation of financial resources, personal hygiene material was provided to retirement and children's homes. Also, a referral system for victims of violence was setup together with the UN Populations Fund, and training was provided for standard operational procedures. Within the Joint Sustainable Development Goal project, a roadmap for sustainable finance was developed with the Ministry of Foreign Affairs, International Business and International Collaboration, the Agrifood Systems Transformation Accelerator, the pineapple project was implemented together with LVV, and the project "Leaving no one behind" with the Ministry of Regional Development and Sport was finalized.
- Within the NC3 project, a National Strategy and Action plan concerning Awareness, Education, and Training on Climate Change was developed for various groups of stakeholders. One of the priority actions listed in this action plan is "Implement climate change documentary for the youth in different local languages produced by non-governmental organizations (NGOs)/civil society working with tribal communities" (Green Heritage Fund Suriname [GHFS], 2022).

Strategic outcome 6: Identify and access financing and investment especially for innovation-driven climate change adaptation technologies.

- With regard to developing a comprehensive strategic plan to consider investments in Suriname, a GDS was finalized in February 2025 for ROM with both mitigation and adaptation actions. Priority areas for finance during the 28th Conference of Parties (COP 28) in Dubai were finance for adaptation, loss, and damage; capacity building; and simplified procedures to access climate funds.
- A NAP costing methodology is being developed with support from the NAP Global Network to equip the country's NAP team with a tool to cost priority adaptation actions.

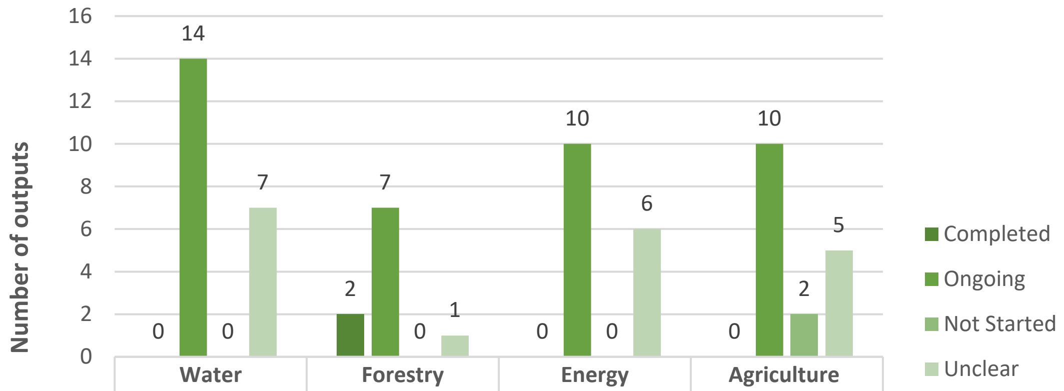
3.2 Progress by Sector and Highlights to Date

At the sectoral level, the NAP has identified a priority ranking of the productive sectors for climate action. The priority productive sectors for implementation in the first phase (short term) are water, forestry, energy, and agriculture, livestock, and fisheries. KPIs have been identified in the NAP for these sectors. Tables 2 to 10 below provide a summary of progress in each of these priority sectors and in each of the crosscutting sectors (education, health, environment, DRR, and spatial planning). The KPIs for each of the outputs related to the adaptive measures specified in the NAP are used to assess the implementation status for each of these sectors. Each of the tables is preceded by a short narrative summary of sectoral strategic objectives, adaptation measures, key agencies, notable achievements, general progress, and barriers.

For sectors in the second phase of NAP implementation (infrastructure, housing, tourism, and mining), no KPIs have been identified. Also, not much information is available for these sectors, and many of the measures may have not started yet as the implementation was planned to begin in 2024. Progress in these sectors therefore has not been assessed.

Figure 2 illustrates the progress made in the priority sectors of water, forestry, agriculture, and energy, in terms of the number of outputs with varying implementation status. For simplicity, the term *agriculture* is used to refer to the sector as a whole, including livestock and fisheries. The most progress has been made in the forestry sector. Some outputs that can be highlighted are the establishment of an emissions reference level, the GONINI Geoportal website and Kopi platforms where forest information is publicly accessible, and training in SFM provided to local communities. Good progress is also being made in the water, energy, and agriculture sectors and can be categorized as ongoing.

Figure 2. Progress in NAP implementation in priority sectors, showing the number of outputs at different stages of implementation of each strategic objective



	Water	Forestry	Energy	Agriculture
Completed	0	2	0	0
Ongoing	14	7	10	10
Not Started	0	0	0	2
Unclear	7	1	6	5

Sectors

Note: "Unclear" indicates that insufficient information was available to determine a measure's status.
Source: Based on data in Tables 2–5.

Water production centre at La Liberte, district Commewijne. Source: Public Relations Department, SWM.

Water Sector

The NAP has identified four strategic objectives, eight adaptation measures and 21 outputs. The lead agencies for the water sector are the Ministry of Natural Resources (NH) and the Suriname Water Company (SWM). The key NAP achievement was the development and adoption of a Sectoral Adaptation Strategy and Action Plan for the water sector. The Sectoral Adaptation Strategy and Action Plan contains seven concept notes that have been developed for priority areas following stakeholder consultations. The Bureau of Gender Affairs, within the Ministry of Home Affairs, organized training sessions for representatives from various water-related ministries to further develop these concept notes into proposals for implementation.

Based on the KPIs, we can see that some progress has been made in the water sector. Through the GCCA+ project (phases 1 and 2) and support from the IDB and Inter-American Institute for Cooperation on Agriculture (IICA), various activities have taken place. Overall, the progress made in the sector can be categorized as ongoing. More progress needs to take place in terms of approval of legislation for the water sector. Also, not all districts have developed their disaster risk plans.

One of the key barriers that may have impacted progress in the water sector is the delay in approval of the draft laws Groundwater Act, Groundwater Protection Areas, and Supervision of Drinking Water Quality, and the lack of legislation on Integrated Water Resource Management (IWRM) and water boards. Regarding the latter, the absence of relevant legislation impedes the adequate functioning of the six water boards in Nickerie, which are managed by the Overlying Water Board Multipurpose

Corantijn Project. The draft laws have been submitted to Parliament for approval. The IWRM Department of the Ministry of NH lacks staff and the financial resources necessary to implement the IWRM plan. In order to establish the Water Authority, specific legislation is needed. The legislative development process can take an exceptionally long time.

Table 2 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the water sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 2. Progress in implementation of adaptive measures under strategic objectives for the water sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Comprehensive national research program on social, environmental, and economic baselines, climate science, vulnerability, impacts, and risk management	Undertake in-depth studies and establish an observation network and monitoring system in order to enhance water management and sustainable use of water resources	District-level risk maps developed: ongoing	1. Within the GCCA+ phase 2 project, assessments were conducted to determine the risks and risk areas in the different districts, as well as for certain resorts. A 4-day training was organized to build this capacity in all 19 districts. Simulations were also conducted in Nickerie and Coronie to test the disaster response and identify weaknesses. 2. All districts have received the necessary training to develop a disaster risk plan, but more time and support focused on the districts Coronie, Nickerie, and Saramacca. The districts Saramacca, Commewijne, and Coronie have finalized their disaster risk maps with support from the GCCA+ phase 2 project. The districts Nickerie and Para submitted their disaster risk plans to the National Coordination Center for Disaster Management (NCCR) for review. The Bureau of Public Health (BOG) provides input on the disaster risk maps and plans based on the results of monitoring of drinking water and recreation. 3. Model simulations were also done by using the IDB hydro-bid model for surface water. In 2019, 20 water professionals were trained in the use of this model. The model was calibrated to be applied in testing scenarios for the four major rivers: the Suriname, Saramacca, Coppename, and Nickerie rivers. 4. GHFS has produced a policy paper to address flooding in Suriname. Findings from the report *Paramaribo Flood Risk Assessment* and NC3 were used.
		IWRM plan implemented: ongoing	1. NH started the process of developing an IWRM action plan, but it is currently on hold. The Ministry is currently creating partnerships with various stakeholders and filling the vacant positions at the IWRM Department.[10]

[10] The IWRM Department oversees the administration and policy of integrated water management, coordinates policy in this area with relevant actors, and acts as a liaison with other stakeholders.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	**Highlights to date**
			2. A Climate Vulnerability and Risk Assessment was conducted in 2022 for the water facilities of SWM in Nickerie, Paramaribo, Wanica, and Para. Part of the process involved making an inventory of the facilities that are exposed to the effects of climate change.
		Successful scale up of pilot projects: ongoing	Some examples of successful pilot projects are: 1. Within the GCCA+ project, a study was conducted regarding surface water. 2. Water-quality measurements of surface water were carried out by Stichting Water Forum as well as WLA. Stichting Water Forum's study was focused on standard measurements in the coastal area of dissolved oxygen, temperature, etc. WLA's study was to monitor the water quality of Suriname, particularly the coastal strip (Groot-Paramaribo, Saramacca Canal, and surrounding areas). During the GCCA+ project, water-quality measurements were also carried out during the felling of trees.
		No KPI: unclear	**Note**: No KPI is identified for the NAP output "Conduct feasibility studies to explore the possibility of additional groundwater projects, as well as alternative freshwater resources, to buffer the effects of saltwater intrusion."
		IWRM supportive legislation passed: ongoing	Draft legislation on surface water was supported by the GCCA+ phase 2 project. A presidential task force/committee is working on expediting the review and approval of this draft.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
		Increase in the level of public awareness: ongoing	Since no survey was conducted to determine if the level of public awareness has increased, no statement can be made in this regard. However, some activities have taken or are taking place, such as: 1. Awareness campaigns initiated with support by the GCCA+ phase 2 project and financed by the UNDP and European Union, such as IWRM, billboards, and short videos, have strengthened the publication department of NH and Stichting Water Forum in media. SWM awareness was also supported by the GCCA+ phase 2 project and financed by the UNDP. 2. NH is planning to implement a national awareness program. 3. As part of the IDB project "Water Supply Modernization Program," which supports SWM, a training program for women and men in plumbing, water management, and climate change aspects will be designed and implemented. 4. BOG provides project-based water, sanitation, and hygiene training for focus groups on climate change effects and sanitation.
Develop and implement law, policy, and regulation to ensure sustainable exploitation and use of drinking water resources and wastewater management	Addition of the climate change aspect including the law on meteorological services after formal approval of the water law, and development of surface water law	Revised legislation passed: ongoing	Draft legislation on surface water is finalized and submitted for approval. Draft legislations on water are in preparation, namely the Groundwater Act, Water Protection Act for Groundwater Extraction Areas, Supervision of Drinking Water Quality and Law on Surface waters. The draft Groundwater Act[11] of 2007 focuses on the extraction of groundwater.

[11] The proposed Groundwater Law does not pertain to land drainage up to 2 meters unless the Minister of Natural Resources (Min NH) has designated the area as a water extraction area, or if mining occurs and the area has been declared as a water extraction area.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	Highlights to date
	Assess options for the establishment of an institutional organization for the enhancement of water management	Water Resource Authority established: ongoing	1. An IWRM Department is established within NH with support from GCCA+ phase 2 project. Within the project "Strengthening Integrated Water Management," World Waternet and Rijkswaterstaat are collaborating to provide support to NH. This cooperation is funded by the Makandra program. 2. The Water Platform was set up at NH in 2023 for 3 years to advise on the national water policy plan and implementation of water policy within the various ministries.
		More water boards established: ongoing	There are currently six water boards in the district of Nickerie. Preparations are being made to establish waterboards at Weg naar Zee.
	Develop robust land management and waste management policies	Pollutant loads in aquifers are lower: ongoing	At the national level, there are currently no environmental quality requirements for measuring ground and surface water quality. Water quality measurements are taken to determine the pollution in water resources. The guidelines of the World Health Organization (WHO) are used for drinking water quality. The IDB project "Water Supply Modernization Program" (started in 2020) aimed to improve efficiency, quality and financial and environmental sustainability of potable water services by SWM. The project plans to upgrade the water production infrastructure and institutional capacity of SWM. The project aims to improve the capacity of SWM's water-quality laboratory toward accreditation through implementation of key recommendations of the Institutional Strengthening Plan and development of a water supply strategy for the interior of the country (IDB, 2020).
		No KPI: unclear	Note: No KPI is identified for the NAP output "Treatment so as to reduce discharge of pollutants incl. Sediments, sewage, agrochemicals and mining pollutants into water systems and protect aquifers from surface contamination" related to the adaptive measure "Develop robust land management and waste management policies."

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Develop policy, regulations, standards, and best practice guidance to support national water resource management that is adaptive to climate change	Increased number of reservoirs: ongoing	Projects that were implemented by IICA with the Australian High Commission's Direct Aid Program are: • As part of the project Increasing Access to potable water for Rural primary Schools district-Sipaliwini, two water towers were installed with a capacity of 4,000 gallons each at two primary schools (Pt. Voorbraak and Kankantrie) in 2020. Additionally, a low-cost rainwater harvesting system, consisting of six 1,000-gallon tanks and nine 600-gallon tanks, was installed at the primary school Marcus Pobosie. • An IICA project with the Australian High Commission's Direct Aid Program regarding increasing access to potable water for Indigenous communities in Suriname started in March 2024 and was completed in October 2024. The objective of the project was to increase storage capacities of potable water at the three rural communities to minimize incidents of water-borne illnesses from consumption of contaminated water sources through the installation of low-cost rainwater harvesting systems. Low-cost rainwater harvesting systems were installed in the Indigenous communities in Matta and Singri Lanti in the Para district, and the Maroon community of Tamarin in the Marowijne district. The systems were installed at selected households, giving priority to elderly, physically disabled and single-woman-parent households.
		Increased budget for water-related infrastructure: ongoing	Currently SWM is preparing a strategic plan to increase the supply mechanisms through various projects.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Policies to increase efficiency of other water type use and supply mechanisms e.g. to improve infrastructure" related to the adaptive measure "Develop policy, regulations, standards and best practice guidance to support national water resource management that is adaptive to climate change."

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Water management program to increase resilience of water supply	Consider current integrated water resource management approaches and future proposals with an intent of mainstreaming climate change adaptation processes into these frameworks	Pollutant loads in aquifers are lower: unclear	With regard to pollutant loads in aquifers, no data is currently being collected on a national level. A monitoring unit will be set up consisting of AdeKUS and various ministries.
		Volume and quality improvements in water resources: ongoing	With regard to improvements in the volume and quality of water resources, a drinking water supply strategy for the interior with consideration of climate change aspects will be developed. The IDB project “Water Supply Modernization Program” will also support SWM in building storage tanks as a component to upgrade the water production infrastructure of SWM.
		Volume increase of reused water: unclear	No relevant information could be collected on the KPI on increasing the volume of reused water.
Climate-resilient infrastructure development to ensure availability of drinking water and other uses of water	Develop and upgrade infrastructure for water supply and irrigation	Increased reliability of irrigation infrastructure: unclear	No relevant information could be collected on the KPI on increased reliability of irrigation infrastructure.
		% of water loss reduced: ongoing	With regard to reducing the percentage of water loss: 1. A drinking water supply strategy for the interior with consideration of climate change aspects will be developed in the IDB project “Water Supply Modernization Program.” 2. In 2022, the EnGenDER project provided three Indigenous and 34 tribal communities with 95 water tanks to serve as a buffer during flooding and droughts and provide access to clean drinking water to the communities of districts Brokopondo and Sipaliwini. Support was also provided to the community of Klaaskreek, in the District of Brokopondo, with the rehabilitation of the water system.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
		No KPI: unclear	Note: No KPI identified for the NAP output "Develop mechanisms to reduce intrusion of river and sea water."
	Develop and upgrade infrastructure to cope with the effects of climate change and sea level rise, e.g., drainage and flood protection	Reduced incidence of leakages: ongoing	With regard to adapting to saltwater intrusion, a technical and economical feasibility study is being conducted to desalinate brackish water using renewable energy. At the water production centre at La Liberté in the district of Commewijne, surface water from the Suriname River is treated to become drinking water by means of reverse osmosis. Regarding the reduction of incidence of leakages: 1. SWM is implementing the project Gefaseerde Ontwikkeling Leveringsplan (2025–2030) in collaboration with Waternet, taking the effects of climate change into consideration. This project will be implemented until June 2025 in Paramaribo, Wanica, and Para. To meet present and future demands for drinking water, a distribution strategy will be developed for SWM. For 2025–2026, a distribution strategy for the remaining drinking water supply areas of Commewijne, Saramacca, and Nickerie will be developed. 2. The IDB project "Water Supply Modernization Program" supported SWM with the expansion of the pump station in Helena Christina. Detection and repair of leaks is also one of the outputs of this project. 3. SWM developed a Water Resources Management Plan that takes climate change impacts into consideration for sustainable use of water resources.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Safety training on the use of chainsaws at Bigi Poika. Source: SBB.

Sustainable Forest Management

The forestry sector includes four strategic objectives, seven adaptation measures, and 10 outputs. The lead agency for the forest sector in Suriname is the Foundation for Forest Management and Production Control (SBB) within the Ministry of Land Policy and Forest Management. The Nature Conservation Division is the authority responsible for the Multiple Use Management Areas.

Based on the KPIs, we can see that significant progress has been made in the forestry sector. SBB has realized various outputs such as setting up forest- and climate-related platforms that are open to the public; organizing workshops and training focused on local communities, the private sector, and concessionaires; and contributing to national reporting related to determining the emission levels from activities in the sector. During the focus group meetings, stakeholders expressed the view that engagement of local communities could be enhanced.

The following challenges have been identified by the stakeholders for the forestry sector:

- The focus of the Government of Suriname has shifted from the introduction of CSF to participation in the compliance market for its standing forests.
- More evidence-based case studies that incorporate traditional and local knowledge are needed in addition to academic and scientific research. Local communities are not sufficiently consulted.
- Lack of financial resources and technical capacity are barriers.

- Inadequate management has resulted in a lack of institutional capacity, knowledge-based decision making, coordination between the various sectors, and policy on zoning. Furthermore, relevant legislation is outdated.
- Research is not translated into salient information, nor is it translated into Dutch and local languages.
- SBB activities are project based and are not guaranteed to continue without financial support. SBB is unable to carry out its duties in an efficient manner. GPS, trackers, and vehicles are needed for the SBB team to carry out monitoring activities.
- The Forest Reference Emission Levels (FRELs) were prepared by consultants. Even though the SBB team contributed to their preparation, they are not equipped with the skills needed to prepare FRELs on their own.
- The National Mangrove Strategy was developed in 2019 but is not yet being implemented.
- Corruption and a lack of policy continuation also hinder the sector.

Table 3 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the forestry sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 3. Progress in implementation of adaptive measures under the strategic objectives for the forestry sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Comprehensive national research program on social, environmental, and economic baselines, climate science, vulnerability, impacts, and risk management	Continue analysis on past climate impacts on forests and SFM with emphasis on mangroves	Emissions reference level established: completed	Suriname submitted its second FREL in 2020 in which emissions were projected for the period 2020–2024. The total projected emissions in tonnes of carbon dioxide (tCO_2) per year were for 2020 (15,238,428), for 2021 (15,858,865), for 2022 (16,479,303) for 2023 (17,099,741), and for 2024 (17,720,179). The third FREL has been developed and is under review by the UNFCCC (expected to be finalized by the end of 2024).
	Identification, analysis, and implementation of sustainable forestry options in Suriname including but not limited to: soil degradation and nourishment, reforestation planning, irrigation, protected areas, agroforestry, buffer zones, production and harvesting, natural stands, and participatory management	Number of sustainable forest actions implemented: ongoing	The following are some examples of projects that included sustainable forest actions: 1. A project[12] initiated with Conservation International Suriname on climate-smart forestry (CSF) was launched in 2021. The objective of the project was to realize sustainable wood exploitation, reduce emissions by 20%, and foster healthy forests. The project has been put on hold by the Government of Suriname, which has chosen to move toward the compliance market without taking into account the country's commitment to the Paris Agreement. 2. The Promoting SFM project aimed to improve the forests' sustainability by supporting the forest information system used by SBB and CSF under wood concessionaires. 3. Sustainable Forestry Information System Suriname developed and operationalized to monitor the management of the timber rights. 4. Procedures and guidelines for SFM have been developed. 5. Training modules have been developed and implemented. 6. Agroforestry research and climate-smart agriculture have been conducted in communities by CELOS.

[12] The activities of the CSF project included encouraging reduced-impact logging, establishing M&E protocols to monitor the impact of wood exploitation and carbon emission reduction, reviewing Forest Management Plans and Annual Operating Plans and support provided to Bigi Poika to develop these plans, and developing a biodiversity monitoring plan.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			7. A research program has been implemented by CELOS on SFM. 8. CELOS, with its permanent sample plots data, takes part in a pantropical study concerning the impact of climate change on managed tropical forests.
Awareness raising and capacity building program on SFM, forest carbon accounting, and forest carbon monitoring	Perform awareness activities regarding the role of forest conservation, restoration, and sustainable use of forests in climate change	Increase in public awareness levels: ongoing	No surveys have been done to see if the public awareness level has increased. However, public platforms have been set up with information about forests, forestry, and climate change, such as GONINI Geoportal (all forestry-related information, collaborations) and Kopi (statistical information, research reports for students and policy-makers).
		Number of training programs implemented: ongoing	Some training and workshops that have been organized include: 1. Workshops and training within the IDB project regarding SFM: a) a forestry training program for concessionaires and local communities to improve company planning and enhance sustainable operations during felling and dragging of trees in the forest; b) training for concessionaires to formulate a code of practice, namely guidelines for sustainable wood exploitation (how to design a felling plan); c) the Sustainable Forestry Information System Suriname was introduced in 2019 to visualize the feasibility of wood and monitor wood exploitation from felling plan to the location of the trees, training to use and continually enhance this system for wood exploitation and processed wood. 2. The IDB project regarding SFM also provided support to the communications department in developing infomercials to highlight SBB. Communications personnel received training in developing these infomercials and the department received equipment to make the infomercials. 3. SBB has provided training in SFM, reduced-impact logging, basic entrepreneurship, collection of data to detect deforestation, use of GPS and drones, and codes of practice. This training has been organized within the communities. A workshop within the CSF pilot project on Project Carbon Credits was also organized for the private sector and local communities of Bigi Poika and the tribe of the Matuariers.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	Highlights to date
			4. In July 2024, 26 students successfully completed the nature technical phase of the aspiring game warden (jachtopzieners) training at the National Forestry Services (Nature Conservation Division) of the Ministry of Land Policy and Forest Management, which was implemented by the Jan Starke Training Center. The training was supported by the GCCA+ project and the Amazon Sustainable Landscapes Program 2 and funded by the European Union in collaboration with the UNDP and Global Environment Facility (GEF) to build capacity within the Nature Conservation Division. 5. Regarding education, the Institute for Natural Resources and Engineering Studies has included SFM in their curricula. 6. In 2019, CELOS organized training, which resulted in two publications. One student is being guided in her thesis to validate allometric comparison to determine the carbon content in above-ground biomass from data derived from forest sampling. 7. Caribbean Natural Resources Institute provided training in climate vulnerability, gender, and climate rationality in analyzing climate impacts in Trinidad and Tobago and Suriname, in which GHFS, Amazon Conservation Team, and CELOS participated. 8. Communities within Apura, Marshall Creek, Brownsweg, Brokopondo, Para and surrounding areas have been trained in setting up nurseries and in writing projects to be submitted to the Small Grants Programme. 9. In the village of Pikin Slee, agroforestry has been set up to combat shifting cultivation. 10. Within the GCCA+ project, SBB in close collaboration with CELOS estimated the carbon stocks of mangrove forest as part of the mangrove biodiversity monitoring system established by both institutes (2019–2024).
		Carbon issues referenced in policy documents: completed	Within the GCCA+ project, carbon stocks of mangrove forests have been determined (Mangrove Biodiversity Monitoring project) and mapped (see GONINI Geoportal website). There are now 17 permanent sample plots along the coast.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
		Number of communities actively monitoring forests: ongoing	With regard to forest monitoring, the following projects have been implemented: 1. SBB together with CELOS developed allometric comparisons to determine the carbon content of forests. 2. The Association of Indigenous Village Leaders in Suriname (VIDS) has implemented projects where the community has developed three-dimensional maps with information on the resources available within their areas and how they make use of those resources. Several new initiatives, such as in the Wayambo area, will invite government institutions to increase their awareness of the threats faced by the community and their resources and how they protect themselves and their resources. 3. Amazon Conservation Team is working with 42 Indigenous and Maroon rangers in forest monitoring and management. 4. In Bigi Poika, an inventory has been conducted within the CSF project (SBB) and logging activities have been compared with reduced-impact logging to see how much this contributes to emission reduction. In Bangi Creek, forest degradation is measured near mining areas. Carbon stock is being measured according to a standard protocol in the interior. This is done together with Amazon Conservation Team and local communities to conduct a forest inventory. The community of Brownsweg has given SBB permission to place the map on its GONINI Geoportal website (Sustainable Forestry Information System Suriname) so the traditional authority now also has insight.
Develop and implement a governance and finance regime to incorporate climate resilience and mitigation in forestry	Assess options to access climate finance through UNFCCC mechanisms and other related funding avenues, financing carbon	Increase in funding: ongoing	1. The focal point for the UNFCCC, GCF, and GEF is ROM. There is no financial plan available. Currently, all resources are in a general budget of the Government of Suriname. The Ministry of Finance is making preparations to set up a budget for climate finance. For now, it is still unclear what this will entail, as discussions are ongoing. 2. International funding for SFM is available. SBB is actively searching for funding for climate resilience.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	sequestration by forest and SFM or climate resilience and mitigation action		3. SBB has contributed to the development of the REDD+ (Reducing emissions from deforestation and forest degradation in developing countries) strategy, including the financial strategy and the production of internationally tradable mitigation outcomes.
	Review and update Forest Management Act to include climate change considerations	State Order approved: ongoing	A review and update of the State Order is in progress. The Climate Change unit within ROM is preparing climate legislation to include carbon offsets.
	Further strengthen National Forest Management System	Area of reforestation increased: ongoing	SBB has been strengthened in monitoring the country's forests. The National Forest Management System is operational, but not yet institutionalized. The following maps have been produced: deforestation, forest cover, and land use, and land-use change.
Management of mangrove and coastal forest resources	Include mangrove conservation and afforestation in REDD+ strategy and identify REDD+ readiness actions needed for mangrove carbon sequestration, including through mangrove planting, effective management, and rehabilitation	No KPI: unclear	No KPI is identified for the NAP adaptive measure "A programme for mangrove conservation and reforestation and afforestation of mangroves along coastline is implemented." Even though no KPI is identified, the following information is noteworthy: ● Within GCCA+ phase 1, a National Mangrove Strategy was developed, research was done on classification of the wetlands, and a mangrove monitoring system was set up. ● Research in wetlands, including mangrove ecosystems, has been part of the CELOS research program since 2003.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Energy

For the energy sector, four strategic objectives, seven adaptive measures, and 16 outputs were identified in the NAP. The Ministry of Natural Resources (NH) is in charge of ensuring the integrated and efficient management and development of Suriname’s natural resources, while also taking into account the environment, safety, and rights of local communities. The Energy Authority Suriname (EAS) is the supervisory and management body that regulates, monitors, informs, and advises on issues in the energy sector.

Based on the KPIs, some progress has been made in the energy sector. The EAS was established in 2016 according to the Law on the Energy Authority Suriname and the Electricity Law. An Electricity Sector Plan 2022–2027 is being developed in accordance with the Electricity Law. Studies have been conducted on the feasibility of introducing electric vehicles in Suriname. A financial study was conducted for introducing renewable energy in a rural area of the country. The Government of Suriname has removed subsidies for gasoline and diesel, but is still providing diesel to the villages in the interior for energy generation.

The key barriers and challenges for the energy sector are:

- insufficient technical capacity to connect energy and electricity with climate change,
- lack of financial resources within the sector to implement the NAP,
- poor coordination in the sector, and
- lack of technical capacity within EBS and EAS (staff within these organisations talk about a “brain drain”). EAS has restrictions when it comes to hiring new personnel.

Table 4 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the energy sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 4. Progress in implementation of adaptive measures under strategic objectives for the energy sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Comprehensive national research program including analysis and collecting data on past climate impacts	Implement an energy sector-focused national research program to address links between climate change and climate impacts; gaps in understanding about the sector and climate change; and translation of data analysis to useable and well-communicated policy options	Sector plans based on climate risk: ongoing	An Electricity Sector Plan2022–2027 is being developed according to the Electricity Law to be finalized by the end of 2024. This Plan will include a strategic plan for 20 years, a technical plan for 5 years, and a regulatory plan. As part of the Electricity Sector Plan, an Integrated Resource and Resilience Plan is also being developed.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Feasibility of new energy sources, such as wind, solar, biomass and hydropower, as well as electricity generation methods."
		Increased renewable energy portfolio: ongoing	EAS collects data on energy prices and lake levels of the Pr. Ir van Blommenstein Stuwmeer from State Oil Power Company Suriname. Currently EAS doesn't have a database. Within the project "Energy Information and Management System," a database that includes energy data will be setup by 2025.
Awareness and capacity building program to encourage training of new professionals in energy research and development	Facilitate technical and university education that focuses on the use of new technologies and research into alternative technologies	Climate introduced in training of energy professionals: ongoing	1. With the development of the oil and gas industry in Suriname, the various educational institutions are focusing on this sector. 2. Students at the AdeKUS studying environmental science can choose to take a course on renewable and non-renewable resources. Students in electrical engineering have the option to choose courses on renewable energy and clean technology. 3. The Master of Science Programme in Sustainable Management of Natural Resources (SMNR) has a specialization in sustainable energy resources and focuses on the sustainable development of the energy sector with emphasis on the optimal use of renewable energy sources and also taking into account the economic, social, and environmental aspects. Training on solar energy was provided by the Suriname Energy Chamber with the focus on companies.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Strengthen government institutions or establish new institutions to facilitate the newly trained professionals in research and development	International training facilities established: unclear	No relevant data were collected on the establishment of international training facilities.
		Increase in public awareness: ongoing	With the energy reforms, EBS has increased public awareness by providing tips on energy saving, energy efficiency, and use of energy management tools.
		No KPI: unclear	Note: There is no KPI for the NAP output "Facilities developed to enable the professionals to do the work required of them" related to the adaptive measure "Strengthen government institutions or establish new institutions to facilitate the newly trained professionals in research and development."
Financial incentives to influence energy use and decrease emissions	Deploy market-based incentives to transform the energy sector	Market based instruments implemented: ongoing	A financial study, "Business and Financial Mechanism: Economic and Financial Business model for grid Renewable Energy Solutions in Rural Suriname," was undertaken, in which a pilot energy program was proposed as a Nationally Appropriate Mitigation Action. The pilot program focuses on rural business models for Stoelmanseiland and Langatabbetje.
		Fossil fuel subsidies removed: ongoing	Fossil fuel subsidies for gasoline and diesel were removed by Government of Suriname in February 2023 but not specified for the energy sector. The price difference for transport of people (buses and boats) is temporarily still subsidized by the Government of Suriname. Currently diesel is still being transported to the country's interior for energy generation. Some villages still do not pay for electricity.
		Increased energy efficiency: ongoing	A feasibility study was conducted by EBS for electric vehicles. There are incentives for the import of electric vehicles. No incentives are provided by the Government of Suriname if households or businesses begin using solar panels. According to the energy legislation, EBS has the monopoly to distribute electricity. It is possible to have more energy generators, who should then sell their electricity to EBS for distribution on their network.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Facilitate and/or incentivize alternative means of transportation."

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Conduct assessment and baseline for the development of the national energy strategy	Develop national energy policy, strategy, and regulatory framework	Increased energy efficiency: ongoing	An Electricity Sector Plan is being developed according to the Electricity Law to be finalized by the end of 2024. This Plan will include: a strategic plan for 20 years, a technical plan for 5 years, and a regulatory plan.
		New building codes implemented: ongoing	The Ministry of Public Works has the responsibility for building safety in the country and uses the 1996 Caribbean Uniform Building Code (CUBiC) code developed by the organization of Eastern Caribbean States (International Code Council Digital Codes, n.d.). The CUBiC code was developed to provide appropriate building standards for the Caribbean region. Suriname is in the process of adopting and implementing the CARICOM Regional Energy Efficiency Building Code (CREEBC), which is based on the International Energy Conservation Code (International Code Council Digital Codes, n.d.).
		No KPI: unclear	Note: No KPI is identified for the NAP output "Improved enforcement of zonal planning and regulation to stimulate efficient city design (smart cities). E.g. Stimulate building flats instead of individual houses. Restrict the repurposing assigned land use."
	Amend the Act on Import Duty 1996	Import duties on renewables removed: unclear	Not able to collect relevant information.
	Develop and deploy new financing mechanisms for communities, entrepreneurs, and small business owners	Increased funding for rural electrification: ongoing	A financial study, "Business and Financial Mechanism: Economic and Financial Business model for grid Renewable Energy Solutions in Rural Suriname," was undertaken, in which a pilot energy program was proposed as a Nationally Appropriate Mitigation Action. The pilot program focuses on rural business models for Stoelmanseiland and Langatabbetje.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Agriculture, Livestock, and Fisheries

The NAP includes four strategic objectives, 10 adaptive measures, and 17 outputs for the agriculture, livestock, and fisheries sector. The leading agency for policy on this sector is the Ministry of Agriculture, Livestock, and Fisheries (LVV). Various projects have contributed to some progress made in this sector. A Free, Prior, and Informed Consent (FPIC) protocol has been developed by VIDS and KAMPOS (a collaboration of Tribal People in Suriname consisting of the Kwinti, Aluku, Matawai, Paamaka, Okanisi, and Saamaka) and is yet to be finalized. Training is provided on request by LVV to farmers and women's organizations. Other organizations such as the Suriname Red Cross and IICA also provide training to communities and raise awareness on the impacts of climate change.

The key barriers and challenges identified for the agriculture sector are:

- During the focal group meetings, there was a perception among some stakeholders that rice farming was prioritized at the expense of other production that is also heavily impacted by flooding and loss of crops.
- LVV is understaffed and capacity strengthening is needed for personnel to improve public awareness, provide support to farmers, develop climate forecasts for the sector, and use software to map the locations of farms.
- Legislation is lacking for water boards to function properly.

Table 5 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the agriculture sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Watering of cassava plants. Source: Don Nasio.

Table 5. Progress in implementation of adaptive measures under strategic objectives for the agriculture sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Comprehensive national research program on climate-resilient crops, agricultural practices, animal husbandry, and fisheries	Develop a comprehensive national research program on climate-resilient crops, adaptive agricultural practices, animal husbandry, and fisheries	Data-driven trend forecasts improved: ongoing	1. LVV does not have the capacity to make climate forecasts for the agriculture sector. A project proposal has been submitted to strengthen the climate change unit in developing climate forecasts for the sector. LVV will work together with MDS to develop an agriculture bulletin.[13] 2. For now, only production data is collected by LVV (Statistic Department). No gender data is being collected and no raw data is received. 3. Within the GCCA+ project, MDS has engaged with various villages to provide information on rain. 4. A map is being developed with support from CELOS based on the various agricultural resorts to make the bulletins or information pamphlets more effective. This map will include the various crops and the areas where they are planted to help farmers adjust their planting schedules. 5. CELOS has supported LVV with funds from the Food and Agricultural Organization (FAO) to improve its database and has also provided training to staff in the use of the database. This project was finalized in January–February 2024. 6. Within the GCF readiness project with the FAO, data has been collected on the weather (temperature and rain), how it has changed in the rice sector, and its impacts on gender in the districts Saramacca, Coronie, and Nickerie. 7. Suriname is participating in the projects “Strategies, technologies, and social solutions to manage bycatch in tropical Large Marine Ecosystem

[13] These bulletins will include information about which crops to plant in the various seasons and how much water to use. MDS can provide information on seasonal forecasts for the various regions and is working on a dashboard with this information.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			Fisheries (REBYC-III CLME+)" and "Enhancing capacity for the adoption and implementation of Ecosystem Approach to Fisheries in the shrimp and groundfish fisheries of the North Brazil Shelf Large Marine Ecosystem." Both projects started in 2023, are being implemented by the FAO, and focus on conservation and sustainable use of marine living resources (FAO, 2024).
		Data-driven trend forecasts improved: ongoing	Researchers and communication staff from LVV were trained in July 2024 in the use of KoboToolbox, a free software to collect, analyze and manage data for surveys, M&E, and research programs. The pilot started in Saramacca by conducting a survey. A digital database will be setup by LVV. The project is implemented by the FAO with finance from China through the project "FAO-China SSC Program – Response and Recovery to the Impact of COVID-19 on Rural Livelihoods and Food Systems in Countries of the Community of Latin American and Caribbean States through South-South Cooperation" (LVV, n.d.). With regard to the KoboToolbox, it is yet to be determined where the data will be kept and who will manage it. LVV will also need to determine if KoboToolbox will be useful to map where the farmers are located. ArcGis would be preferred as it is widely used; however, local staff would need training in its use.
	Conduct analysis on past and future climate impacts on Suriname's agriculture, livestock, and fisheries sector and responses	Increased climate research output: not started	1. No analysis has been done on past and future climate impacts on the agriculture sector in Suriname and its responses. Research on the impacts of climate change is only conducted during project preparation. 2. Climate change impact assessment conducted for the districts Coronie, Saramacca, and Nickerie. 3. Through the GCF Readiness project "Improving the Capacity of the Ministry of Agriculture of Suriname to Build Resilience to Climate Change in the Agriculture Sector," the FAO is providing support to the Ministry of LVV, where a GIS database for impact assessment and maps have been

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			developed (focus group meeting, September 4, 2024). 4. Reflecting on the output, "Attention paid to impacts on yield, agro-ecological research on pests and diseases, and impact of drought and heavy rain on water and food shortages in the interior," stakeholders highlighted activities in Nickerie and Coronie to improve the production of salted and dried fish. With funding support from the GCCA+ phase 2 project, together with the IDB-Lab and IICA, five low-cost solar dryers were established in the districts Nickerie and Coronie (three in Coronie and two in Nickerie). The solar dryers were established for training and demonstration how to improve the production efficiency, hygiene, and quality of locally produced dried fish. A small fish-processing unit was constructed for training and demonstration to improve hygiene and food safety. IICA has also strengthened the knowledge of 23 farmers in the district of Coronie on the cultivation and establishment of dragon fruit orchids. In addition, 25 farmers were instructed on the use of climate-smart technologies, as well as the installation and use of drip and overhead micro-sprinklers (IICA, 2024).
	Strengthen participation in agricultural activities particularly among women and vulnerable groups	Number of pilot projects implemented and scaled up: ongoing	1. For CELOS projects on agroforestry and non-timber forests, women have been engaged. 2. Within the project "Conservation of the agrobiodiversity of key food crops in three (3) Indigenous and Maroon villages" (2014-2021), FPIC was developed together with the VIDS. A standard template has been developed to strengthen the collaboration. It should be mentioned that this FPIC standard template is not to be used for all other villages or local communities; it should be adjusted according to the village. 3. Training was provided in the use of QGIS, GPS, and the development of simple maps with local communities.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	Highlights to date
			4. Within the Agrifood Systems Transformation Accelerator project with the FAO, mainly women have been engaged in the pineapple project in the village of Matta and as pineapple growers in the district of Marowijne and various villages in Para. Also, women have been engaged in the passionfruit project in the interior. 5. Gender analysis assessment was conducted within the GCF Readiness project (FAO/LVV) "Improving the Capacity of the Ministry of Agriculture of Suriname to Build Resilience to Climate Change in the Agriculture Sector" (focus group meeting, September 4, 2024). 6. Within the IICA project "Reigniting Empowerment of tribal women in Suriname through Engagement in transformative Technology (2023-2024)," with support of Agro Cooperative Wi Uma Fu Sranan and the IDB, four crop nurseries were set up, five bore wells were drilled, two irrigation systems were installed for training and demonstration purposes on two demonstration plots of at least 5,000 m^2, and 25 rural women farmers were trained.
		Number of activities implemented: ongoing	An FPIC protocol was developed by VIDS and KAMPOS and is yet to be finalized. The protocol is being reviewed by (six Indigenous and six tribal communities) to make a single protocol. The text of the protocol needs to be edited for endorsement. A manual will be developed to explain how to use the protocol. This manual will be applicable to everyone.
		No KPI: unclear	Note: No KPI is identified for the NAP output "The livelihoods of women farmers and other vulnerable groups are strengthened through training and supported through female headed household specific financing, resource sharing and ownership and network support," related to the NAP adaptive measure "Strengthen participation in agricultural activities particularly among women and vulnerable groups."

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			Stakeholders highlighted that training on good agricultural practices and passionfruit growing were provided in the district of Marowijne. With support from the FAO, KAMPOS has provided training to the village of Witagron on growing highland rice, which is already known and grown in the interior.
Integration of climate resilience into agricultural extension service	Increase the capacity and effectiveness of the agriculture extension services	Behaviour change of farmers documented: not started	Agricultural extension staff have not received any training on climate change, but the GCF Readiness project (FAO/LVV) "Improving the Capacity of the Ministry of Agriculture of Suriname to Build Resilience to Climate Change in the Agriculture Sector" has raised farmers' awareness of the issue in the districts of Saramacca, Coronie, and Nickerie (focus group meeting, September 4, 2024).
	Focus on community-specific and local-specific awareness and training	Number of local persons trained: ongoing	1. No awareness provided by the Communication Department from LVV. 2. The Red Cross Suriname has provided training and information to local communities of the districts in Commewijne (Margretha, Akalekondre, Galibi, Kronenburg) and Marowijne to strengthen their resilience. 3. The IICA, with support from the FAO, implemented the project "Services to support the design, training and maintenance of school gardens in primary schools in Suriname (2021-2022)," where eight vegetable gardens were established to demonstrate climate smart agriculture technologies in seven primary schools and one education centre in the districts of Marowijne, Saramacca, and Paramaribo.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Increased local level capacity on how to manage impacts based on research results," related to the NAP adaptive measure "Focus on community specific and local specific awareness and training." Stakeholders highlighted that the Sub-directorate Research of the Ministry of LVV is understaffed and therefore more personnel is needed.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Provide training and guidance in climate-smart crop production	Number of farms using adaptation techniques: ongoing	Some training that has been provided on the use of adaptation techniques includes: 1. Training provided by LVV in the use of greenhouses and hydroponics. 2. IICA has provided training to cooperatives in Wageningen and Coronie. These training sessions were supported by the GCCA+ project, and included: a. 25 farmers/small business owners trainerd in Coconut nursery set-up and management activities. b. 98 farmers/small business owners trained in vegetative reproduction techniques in fruit crops (citrus and mango). c. 22 farmers/small business owners trained in plant reproduction technology in sweet potato. d. 52 farmers/small business owners trained in Establishment and management of production of Pitaya (dragon fruit) crop. e. 23 farmers/small business owners trained in Installation and management of micro irrigation systems for improve water security in vegetable nursery and vegetable demonstration plots. 3. The IICA, with support from the FAO, implemented the project "Services to facilitate the promotion of perm apiculture and perm agriculture for climate resilience agriculture in Suriname (2020-2021)." This project resulted in the following: a. Training in crop nursery setup and grafting techniques on fruit and vegetables (tomato) of 11 farmers. b. Establishment of crop nurseries and demonstration plots under micro-irrigation systems including fertigation.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	Highlights to date
			c. Training of 25 youths (men and women) from the bee cooperative Wroko Was Wasi in the district of Coronie in bee management and setup of an apiary. d. Skills development in the fabrication of 100 Perone bee boxes and installation. 4. Within the IICA project Building Resilience to Climate Change for Food and Nutrition Security (2023-2024), with support from the Australian High Commission Direct Aid Program, rural farmers from Godo and Djumu in the Disctrict Sipaliwini were trained.
	Climate-control systems on livestock farms and modification of livestock feed in both the coastal area and the interior	Number of farms using adaptation techniques: ongoing	Currently no new research is being conducted on climate-resilient livestock farming techniques. LVV provides farmers with tips on how to minimize the impacts of climate change on their livestock. With support by the GCCA+ project, 10 farmers/small business owners in Wageningen and Coronie were trained by IICA in Porciculture, good farm management practices and the production of pig feed ration with local food resources.
		Improved quality and quantity of feed supply: unclear	No information is available on whether the farmers have access to appropriate livestock feeds at economic prices. LVV no longer supplies inexpensive feed to farmers, as it did for the cattle industry in the 1960s and '70s. Within the IICA project "Building Resilience to Climate Change for Food and Nutrition Security (2023-2024)," with support from the Australian High Commission Direct Aid Program, two demonstration plots of 500 m^2 each were established under a mixed cropping system with micro-irrigation system. Two crop nurseries were set up in Godo and Djumu in the district of Sipaliwini. With support by the GCCA+ project, 38 farmers/agro processors small business owners were trained in:

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			• Hygiene in the processing facility and guideline for international standards for food processing. • Food safety standards within the processing activity flow. • Hygiene of the fish processing facility, post handling and processing and packaging of fish products.
Develop and implement Sustainable Agriculture Policy including relevant climate resilience mechanisms in existing and new regulations	Implement the Water Boards Act as the most relevant legislation for water management in the agricultural sector and strengthen the governance in water management for agriculture	Increase in infrastructure investments: ongoing	1. Six water boards were established in Nickerie (Overlying Water Board Multipurpose Corantijn Project), but they are unable to operate effectively due to a lack of relevant legislation. The concept laws have been submitted to Parliament for approval. No other waterboards have been established. Preparations are being made to establish waterboards at Weg naar Zee. 2. A masterplan for the Saramacca canal project in Greater Paramaribo will be updated within the Saramacca Canal System Rehabilitation Project (SCSRP).
		Increase in infrastructure investments: unclear	No relevant information could be collected on the KPI on increase in infrastructure investments.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Local water management bodies established and operational."
Financial support to farmers, pastoralists, and fishers to build up climate resilience	Develop and provide a financial incentives scheme for farmers, based on research and with results appropriate to each region and ecotype, to implement climate-resilient farming techniques and actions	Increased access to risk insurance: ongoing	1. **No financial incentives scheme has been developed.** In 2022, compensation was provided to farmers after the flooding of their crops. The rice farmers will receive compensation in 2024. 2. An agriculture disaster risk plan and disaster risk strategy has been prepared. 3. Currently, no insurance is available to compensate farmers who suffer damage from climatic events.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Develop and provide a financial incentives scheme to promote aquaculture	Increased access to risk insurance: ongoing	Currently, no insurance is available to compensate fishers and farmers who suffer damage from climatic events. Suriname is already a member of the Caribbean Association of Insurance Regulators and the Insurance Association of the Caribbean Inc.

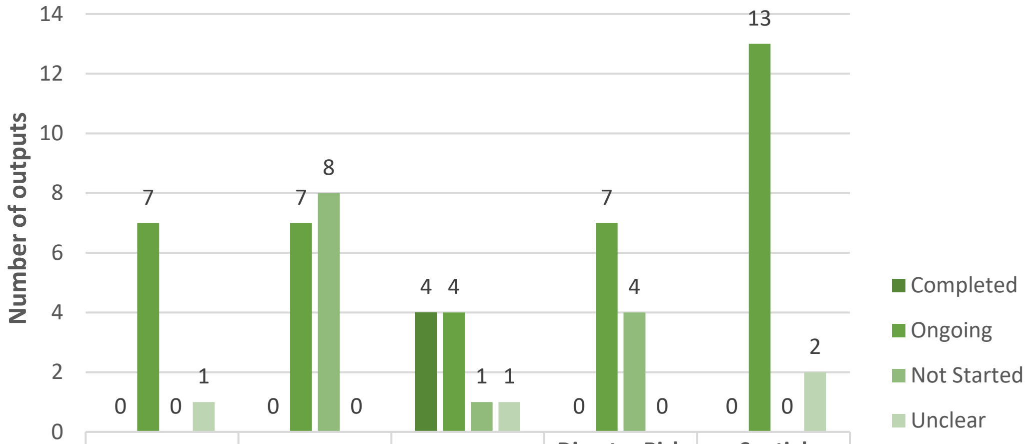
Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Progress in Crossutting Sectors and Highlights to Date

The crosscutting sectors include education, health, spatial planning, DRR, and environment. These sectors cover the whole implementation period of the NAP, for which KPIs have been included in the M&E framework.

Good progress has been made in the crosscutting sectors in terms of the number of outputs with varying implementation status, as illustrated in Figure 3. Most progress has been made in the environment and spatial planning sectors. Some noteworthy outputs are the enactment of the Environmental Framework Act, the inclusion of climate change in reviews of Environmental Impact Assessments (EIAs), a draft Law on Spatial Planning with land-use planning standards and guidelines, and a vision on Spatial Planning to be submitted for approval by Parliament. Good progress is also being made in the education, health, and DRR sectors.

Figure 3. Progress in implementation in crosscutting sectors, showing the number of outputs at different stages of implementation for each strategic objective



	Education	Health	Environment	Disaster Risk Reduction	Spatial planning
Completed	**0**	**0**	**4**	**0**	**0**
Ongoing	**7**	**7**	**4**	**7**	**13**
Not Started	**0**	**8**	**1**	**4**	**0**
Unclear	**1**	**0**	**1**	**0**	**2**

Sectors

Note: “Unclear” indicates that insufficient information was available to determine a measure’s status.
Source: Based on data in Tables 6–10.

Education

The NAP identified three strategic objectives, four adaptive measures and eight outputs for the education sector. The leading government agency for this sector is the Ministry of Education, Science, and Culture (MINOWC). Based on the identified KPIs, some progress has been made in the education sector. Climate change has been incorporated into the subjects of nature education and geography at the primary and secondary education levels, respectively. New textbooks have been developed for these levels that are tailored to Suriname’s context and include content on the environment and climate change. The Government of Suriname is also looking toward implementing technologies to make the classrooms more pleasant due to the high temperatures that can be reached.

The key barriers and challenges for the education sector are:

- The MINOWC has identified new locations further away from the riverbanks for new schools it plans to build in the interior. Since the new locations may be further from students’ homes, the additional distance may form another barrier for children attending school.
- For the schools in the coastal zone that are vulnerable to sea level rise, the focus of the Government of Suriname is only on improving the drainage systems.
- Many schools often experience flooding, which causes delays and disruptions in the academic schedule.
- Stakeholders have also expressed that the information in textbooks should reflect the national context. As indicated above, new textbooks have been developed, but they have not yet been distributed to all schools.
- Organizational climate and environmental-related awareness activities depend on the availability of financial resources and unfortunately can’t take place on a continual basis.
- Obtaining authorization from MINOWC to conduct awareness sessions in schools is a challenging and time-consuming process for NGOs.
- Administrative issues hinder or limit collaboration with the private sector and NGOs.
- Lack of specialists and experts in the field of education.
- Staff shortages.

Table 6 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the education sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 6. Progress in implementation of adaptive measures under strategic objectives for the education sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Provide climate change information at all levels of formal education	Incorporate climate change into curricula for primary, secondary, tertiary, and vocational educational institutions	Curricula infused with climate adaptation content: ongoing	The Institute for Natural Resources and Engineering Studies has field studies in agriculture and hydrometry. SMNR and AdeKUS do not have specific courses on climate change. The environment, including climate change, has been integrated in the subject of nature education from primary (basisonderwijs) to secondary education (middelbaar onderwijs). New textbooks have been developed for primary and secondary education that include the aspects of climate change in Suriname and how to deal with these challenges. A portion of the teachers have been trained in using the new material. When finances are available, NGOs visit schools to organize awareness activities related to a certain international day such as World Environment Day, World Water Day, etc. GHFS organizes such awareness activities related to climate change and sea turtles. The GHFS has been actively conducting climate change awareness sessions at high schools and the university. The Youth Climate Champion Trainings are also conducted by GHFS to empower students to become advocates for climate action in their communities. Digital tools and platforms are available for interactive learning: 1. The WEClimate app: a mobile platform that educates Surinamese citizens about climate issues and promotes young involvement through interactive features and climate action. It also allows users to report problems like land erosion. 2. Klimaatestafette: a platform that raises awareness about climate change among the local communities, students, and schools in Suriname, thereby influencing residents' actions. 3. Climate tools that are useful for Suriname are: Climate TRACE, US Climate Vulnerability Index, Spilltracker.org, En-ROADS and Yale Climate Communication Tools.

Strategic objective	Adaptive measure	**KPI & status** (completed, ongoing, not started, unclear)	Highlights to date
		Increase in graduates from climate-related program: ongoing	SMNR thesis topics are also focused on scenarios regarding how climate change affects different sectors. For example, at the Faculty for Social Sciences, an MSc student's thesis was on climate anxiety and at the effect of climate change on people's emotional well-being.
	Develop advanced research capacity by offering academic courses at the higher curricula level on sustainability topics to train scientists and engineers	Number of climate-related courses offered: ongoing	A DRR-related course is planned at SMNR.
		Number of international expert exchanges: ongoing	Deltares and AdeKUS have signed an MoU to implement climate change projects with the government. The donor is the Dutch Embassy.
		No KPI: unclear	Note: No KPI is identified for the NAP output "Strengthen University capabilities and resources to undertake Suriname specific research in order to support evidence based environmental information, education and training and in turn lead to more realistic policies and actions."
Strengthen public and private sector contributions to education programs on climate resilience and mitigation	Provide incentives to public and private sector experts and organizations to become involved in academic training with professional educators	Government personnel trained in advanced climate-related courses: ongoing	Training provided in advanced climate-related courses included the following: 1. Under the EnGenDER project (gender equality), with the implementing partner Bureau of Gender Affairs of the Ministry of Home Affairs, government representatives from the National Coordination Center for Disaster Management (NCCR), ROM, NMA and Bureau of Gender Affairs of the Ministry of Home Affairs were trained in disaster risk management, climate change, and climate change adaptation in 2021. The training was provided by NGO Institute for Framework Development and Research in Suriname. 2. Within the GCCA+ project phases 1 and 2, mangrove monitoring was conducted together with SBB and CELOS. Ecosystem parameters were measured. Two students from AdeKUS and one from Belgium participated in this assessment. A map was developed of the ecosystems and classification of the mangroves (see GONINI Geoportal website) for the whole coast (17 plots). Informed decisions can be made with this information. Also, standard operational protocols have been developed.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
		Increase in consultation with private sector: ongoing	Under the EnGenDER project, a monitoring, reporting, and verification training was provided to water-related institutions regarding the water Sectoral Adaptation Strategy and Action Plan, taking into account public-private partnerships. Concept notes (including outputs, outcomes, and indicators) are developed on health, gender, climate change and education, and disaster risk management for submission to ROM. The project proposals can then be formulated for implementation.
Develop climate-resilient infrastructure in the education sector	Plan and build new school and allied infrastructure with climate impact. Keep abreast of the latest scientific and medical findings and evidence related to the spread of disease likely caused by climatic changes such as flooding, drought, extreme weather events and other factors	Investment in climate proofing schools: ongoing	The Government of Suriname is searching for options to make it more pleasant for school children such as a technology that is being used in Azerbaijan to cool classrooms naturally. The schools in the interior of Suriname (Boven Suriname, Marowijne) are near the riverbeds, and the Government of Suriname is looking to move the school buildings away from these flood-prone areas. This move will also affect the transport of the schoolchildren and teachers. During the discussions, it was suggested that the Government of Suriname work with the locals in finding new locations for the schools, in order to lower the barriers for children to attend.

Sources: Government of Suriname (2019), stakeholder interviews and focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Health

The NAP identified five strategic objectives, seven adaptive measures, and 15 outputs for the health sector. The leading agencies for the health sector are the Ministry of Health and its health department, the Bureau of Public Health (BOG). Based on the identified KPIs, not much progress has been made in the health sector. Suriname has made limited use of the opportunity for fellowships in climate change and health. There is a lack of knowledge in the health sector about how climate change affects both the sector and public health, as well as the sector's responsibility to educate the public on how climate change impacts our health and how we can adapt.

The key barriers and challenges for the health sector are:

- There is no allocated budget for climate change and health. BOG depends on donor funds and projects for climate change and health-related activities.
- Suriname is in the phase of malaria elimination. When the elimination status is reached, ongoing malaria monitoring will be reliant on uncertain government funding.
- Increased risk of vector-borne diseases (e.g., yellow fever and dengue) due to changes in the vector species' breeding cycles, which are a result of increasing temperatures related to climate change.
- No integrated digital national surveillance system. BOG still uses mostly paper-based data collection for epidemiological surveillance and environmental health monitoring. Delays in reporting or incomplete reporting hinder early warning and response.
- BOG does not have sufficient equipment or human resources and frequently runs out of lab consumables for environmental health monitoring, including sampling and laboratory analysis (air, water, and soil).
- With the transfer of the Health and Education Department from BOG to the Ministry of Health, public outreach is now centralized. However, there is a lack of awareness-raising activities, especially to inform the public on the link between climate change and health.
- BOG lacks dedicated staff for climate change and health.

Table 7 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the health sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 7. Progress in implementation of adaptive measures under the strategic objectives for the health sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Create a comprehensive national research program to track international research	Keep abreast of the latest scientific and medical findings and evidence related to the spread of disease likely caused by climatic changes	Expansion of preventative care programs: not started	This measure has not started due to lack of resources.
	Stimulate national health research and conduct a continuous program for monitoring diseases that have been highlighted with a climate change signal for Suriname, which include malaria, yellow fever, and dengue fever	Area of country monitored: ongoing	1. BOG does not have sufficient equipment to monitor the health sector. There is also a need for equipment to take measurements of air, water, and soil samples. Suriname has been selected for a regional project which will investigate the impact of heat on health. 2. Field and laboratory monitoring cannot be done optimally, due to frequent disruption.
		Reduced frequency and intensity of outbreaks: ongoing	1. A national surveillance manual for early detection and response has been developed. 2. BOG is mandated for national surveillance and preventive health. 3. BOG coordinates the outbreak response. 4. Field epidemiology training program (BOG, the Regional Health Service, Medical Mission, hospitals).
Create a capacity-building program for public health sector on climate-resilient health practices	Strengthening of technical and professional capacity of health personnel, the organizational capacity of health systems, and their institutional capacity to work	Capacity assessment of health care system implemented: not started	1. A vulnerability and capacity assessment is needed for the health sector. Smart hospital initiatives need to be adopted and implemented for climate-smart health care facilities. 2. With the emergence of more vector-borne diseases, an update of the surveillance manual and the notifiable diseases law is required. In Suriname, malaria is being eliminated. The funding to fight malaria will cease when

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	with others. In order to public health resources for the surveillance, prevention, and control of vector-borne diseases		Suriname achieves zero cases by 2025. There is a high threat of yellow fever and dengue.
		Number of foreign-local linkages: ongoing	1. The Pan American Health Organization (PAHO) and WHO guidelines are used to guide policy. Support was received from PAHO/WHO to organize an intersectoral climate change and health workshop in November 2024. 2. International Health Regulations Self-Assessment Annual Report: This tool is used to detect, assess, notify, report, and respond to public health risks and acute events of domestic and international concern (WHO, n.d.).
		Health care professionals trained in climate and health-related areas: ongoing	1. In 2021 BOG organized workshops focused on the health sector to increase awareness of the doctors on their role and their services concerning the impacts of climate change on people’s health. 2. Suriname has been selected to participate in the Cariforum and Health project, where two representatives from the health sector can receive a fellowship. However, the request did not reach the PAHO and therefore Suriname missed the opportunity to have more people trained. 3. Virtual training and workshops available free of cost with continued education credits.
		Engagement between practitioners and communities: ongoing	Currently engagement is curative, but it should be preventive. Reporting from the health institutions (Medical Mission and hospitals) is received very late to make any statements or prognoses.
Launch awareness-raising program on climate-related health impacts, prevention, and treatment	Conduct a public-awareness campaign on climate-related health impacts, such as dangers of prolonged heat stress	Increase in public awareness: not started	The Health and Education Department of BOG has been transferred to the Ministry of Health. Awareness products are not made in a way that is palatable for the various groups. The link between climate change and health is not made. Information related to climate change is always provided by BOG to be included in the speeches of the Minister of Health.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Provide information to the public on climate-related vector-borne diseases	Public access to feedback mechanisms: not started	No formal feedback mechanisms are available, only in projects such as the rain harvest project.
Develop climate-resilient health infrastructure and initiatives	Establish medical centres near potential risk zones and hospitals in areas that are not vulnerable to climate change impacts	Health and climate risk maps developed: ongoing	1. Experimental heat health early-warning bulletin developed in collaboration with the National Oceanic and Atmospheric Administration and PAHO. 2. No links made yet between climate change and diseases reported.
		Number of health care indicators monitored: not started	1. There are surveillance central clinics in the coastal area, from which data is being collected. Medical Mission submits their data on a weekly basis. Currently no event-based surveillance is being conducted for early detection. 2. An integrated system for epidemiology, environmental health, entomology, and meteorological data is not yet available. Such a system would facilitate the development of health and climate risk maps.
		Regularization of health care capacity reviews: not started	BOG lacks the financial resources to be present at the entry points at the border of the country. Through the PAHO, funds are received on a project basis to conduct reviews.
Integrate new technology and procedures into the health sector to enhance disease control	Introduce early disease warning systems that consider temperature signatures for vector-borne diseases and other diseases	Increase in surveillance programs: not started	Only central surveillance is taking place. No assessment has been conducted of the national surveillance system, including environmental health surveillance, to identify the needs or the gaps in surveillance.
		Increased risk mapping: not started	No health risk mapping is being conducted.
		Increased early-warning systems: ongoing	There is an early-warning system available for heat stress. This is made possible by a collaboration between the MDS and BOG on a project basis.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Environment

The NAP identified three strategic objectives, seven adaptive measures, and 10 outputs for the environment sector. The leading agencies in the environment sector are the ROM and the NMA. Based on the identified KPIs, Suriname has made some progress in implementing adaptive measures in the environment sector.

As part of the Amazon Basin Project–Implementation of the Strategic Action Program, executed by ACTO in partnership with UNEP/GEF, Suriname receives support to ensure that the ecosystem services of the mangrove forests north of the Surinamese capital are maintained and sustained. The Strategic Action Program supports ACTO member countries in “strengthening their national institutions for integrated water resources management (IWRM) in the Amazon Basin, and in developing and strengthening the legal and institutional frameworks” (ACTO, 2018, p. 89).

The key barriers and challenges for the environment sector are:

- ROM is not formally tasked with the implementation of the NAP. This implementation was initially the responsibility of the NMA, formerly NIMOS. The Ministry has limited capacity (both human and financial) to coordinate the implementation of the NAP. A government decision is needed to determine which entity will formally coordinate NAP implementation.
- Prioritization of the Government of Suriname on the development of policy documents. Available financial resources for updating the National Climate Change Policy, Strategy and Action Plan for Suriname 2014–2021(NCCPSAP) were reallocated to develop the GDS.
- There is no dedicated Environmental Fund in the National budget or budget for implementation of adaptation efforts within the various ministries. The NAP is currently not linked to an allocated budget.

Table 8 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the environment sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Table 8. Progress in implementation of adaptive measures under strategic objectives for the environment sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Research natural ecosystems and the natural protection they provide from extreme weather events, and how these will be impacted by climate change	Provide support for climate adaptation along the coastal region, including mangroves	Increased area of mangrove forest: ongoing	1. In October 2023, the Government of Suriname (ROM) and ACTO initiated a project to use a collective incentive funding mechanism to restore, protect, and conserve the mangroves. It also involves the participation of a group of women from local communities whose livelihoods are primarily connected to these coastal ecosystems (ACTO, 2023). Rehabilitation of the mangrove area includes construction of sediment retention units and managing interaction with mud flats to enhance mangrove growth at Weg naar Zee. Another relevant project is the Coastal protection project of Ministry of Public Works (2022) which is upgrading the sediment trapping units at Weg naar Zee. 2. IDB project for Bigi Pan on Blue carbon project. Research is also being conducted by World Wildlife Fund (WWF), IICA, and CELOS. 3. The KOPI website shares information on the distribution of mangroves and dead mangrove areas in the coastal districts of Suriname. Figures are available from 2018 and 2023. Increases in mangrove areas have been measured in the districts Commewijne and Wanica: 1,160 ha and 283 ha, respectively (SBB, n.d.).
	Perform a technology needs assessment to draw out and identify priority resilience and low-emission technologies required	New technologies introduced: ongoing	The GCCA+ project introduced new techniques for Suriname, such as the use of drones in forest monitoring and remote sensing to map mangrove forests. Remote sensing and ground truthing can also help reduce emissions of activities, as can the use of automated measuring stations and new software.
		Increase in application of clean technologies: unclear	No activities can be reported as to whether the Government of Suriname is encouraging the industry sector and responsible ministers to put clean technologies and modern climate adaptation techniques into practice, as stated as an output in the NAP.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	Support and advance scientific understanding of climate phenomena and harness that understanding for action in Suriname	Accuracy of climate projections: ongoing	MDS is collaborating with Royal Netherlands Meteorological Institute and the Caribbean Institute for Meteorology and Hydrology. A climate scenario has been developed with regard to sea level rise on the national level.
Create capacity-building program on climate resilience	Lead climate adaptation strategy and country implementation	Number of cross-collaborative strategies: not started	The indicative output for this KPI is "Coordination with ministries and agencies to carry out the national climate action strategies and actions." Stakeholders expressed the need to update the NCCPSAP. No other strategies have been developed.
		Number of cross-collaborative strategies: ongoing	The indicative output for this KPI is "Increased applications for and access to climate funds and financing to implement national climate adaptation strategies." ROM is the National Designated Authority for GCF. Through a GCF Readiness project, the National Designated Authority has been strengthened and manuals, communication strategy, etc. have been developed. Funds the country can access include GCF, GEF, Adaptation Fund, and Special Climate Change Fund and bilateral funds (United Kingdom, Germany, Italy). There are currently discussions to create an Environmental Fund that will collect the revenues raised from penalties and impositions.
Develop and implement law, policy, and regulation to protect the natural environment and build climate resilience	Enact the Environmental Framework Act 2000, which stipulates that climate change be considered in development planning and proposes a fund to finance climate-related research	Enact the Environmental Framework Act: completed	The Environmental Framework Act has been approved by the Parliament.
		Budget allocations to operationalize Act: completed	NMA has been operationalized.
	Require environmental	Climate change EIA	The impacts of climate change are included in EIAs.

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
	impact assessments when developing long-term projects	criteria implemented (for long-term projects): completed	
	Implement conservation strategies designed to protect marine turtles in the face of climate change	Climate change EIA criteria implemented (conservation of marine turtles): completed	Nature Management, in collaboration with Guyana, have a pilot test hatchery for marine turtles. The guidelines of the EIA state that impacts of activities on flora and fauna should also be addressed, including how they will be mitigated.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

DRR

The NAP identified four strategic objectives, seven adaptive measures, and 11 outputs for DRR. The leading agency in the DRR sector is the NCCR. Based on the KPIs, some progress has been made in the DRR sector. DRR plans for five districts have been finalized. NCCR is collaborating with MDS to receive weather forecasts and early warnings of extreme weather events. MDS, together with NCCR, conducts bushfire forecasting and shares this information with the public. Climate change and sea level rise scenarios are now being developed at the national level with support from Royal Netherlands Meteorological Institute and the Caribbean Institute for Meteorology and Hydrology.

The key barriers and challenges for the DRR sector are:

- Lack of a national disaster fund.
- NCCR does not have the capacity to conduct its own research and make forecasts on extreme weather events. It is dependent on weather forecasts and early warnings of extreme weather phenomena from MDS.
- NCCR does not have the necessary financial resources to raise public awareness of extreme weather events and their link with climate change on a continuous basis.
- NCCR is not formally established by law. There is no legislation regarding disaster management in Suriname.

Table 9 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the DRR sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Source: Ministry of Spatial Planning and Environment.

Table 9. Progress in implementation of adaptive measures under strategic objectives for the DRR sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Conduct research into past Sibibusi trends and relationship with regional climatic events and climate change	Conduct research into past hurricane trends and potential links to climate change	Refinement of DRR projections: ongoing	NCCR depends on MDS for weather forecasts and early warnings of extreme weather phenomena. With support from the GCCA+ phase 2 project, early-warning systems have been placed. Quick response teams have been established in the various districts.
		Increased disaster monitoring capacity: ongoing	1. NCCR and District Commissioners have conducted a post-disaster needs assessment of damage incurred in the district of Wageningen due to forest fires. Based on the bushfire in Wageningen, NCCR and the District Commissioners are working on developing a disaster plan for their respective districts. 2. MDS, together with NCCR, conducts bushfire forecasting and shares this information with the public.
		Number of data-sharing initiatives implemented: ongoing	MDS has a good collaboration with Caribbean Institute for Meteorology and Hydrology, Caribbean Meteorological Organization, and Royal Netherlands Meteorological Institute (focus group meeting, September 4, 2024). A climate scenario has been developed with regard to sea level rise on the national level. An early-warning dashboard will be set up.
Expand and improve equipment of the existing infrastructure and implement a national early-warning system	Develop specific legislation with regards to disaster management, incorporating climate change	Strengthened DRR legislation: ongoing	1. By State Decree, NCCR resides under the Cabinet of the President. There is no legislation regarding disaster management. 2. Suriname has started the process of developing its National Strategy for DRR (Country Work Programme) to closely align with the country's plans and initiatives for climate change adaptation (UN Office for Disaster Risk Reduction [UNDRR], n.d.).
		Updated national safety and disaster plans: ongoing	During the workshops, stakeholders noted that the National Road Safety Plan and National Health Disaster Plan are part of the disaster risk management plan, but little information is available on this plan. A national disaster risk reduction strategy is being advanced in Suriname to ensure alignment with the NAP (UNDRR, n.d.).
		Forest Fire Master Plan updated: ongoing	Within the ACTO forest fire management project, a resolution has been signed: "Declaration of Belem." Working groups are established in Suriname consisting of

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
			NCCR, Korps Brandweer Suriname, and SBB.
Establish a disaster relief fund	Establish a disaster relief fund	Increased DRR insurance coverage: not started	There is no disaster relief fund, but some insurance companies (such as Assuria, Fatum, and Self Reliance) have the option for policy-holders to insure their homes and belongings against damages resulting from storms and gusts (rukwinden).
		Increased public awareness (printed and other material): not started	NCCR does not have the necessary financial resources available to print awareness material.
		Increased public awareness (response measures): not started	Due to a lack of financial resources or limited availability, not much is done to raise awareness.
		Increased funding for DRR programs: not started	NCCR provides the victims with necessary material to fix their houses in case of high winds that lead to the loss of their roofs. NCCR can also refer victims to a psychologist to support them in processing trauma as result of loss of their homes and property due to flooding. The Government of Suriname provides the necessary financial resources. It should be mentioned that for the last flood in the interior, specialists were not willing to provide psychological help to the victims.
Incorporate sub-national disaster and hazard concerns in climate adaptation planning and actions	Take actions on priority climate-related risks identified for the Districts of Commewijne and Para	District-level DRR plans: ongoing	The districts of Saramacca, Commewijne, and Coronie have finalized their disaster risk maps. The districts of Nickerie and Para have submitted their disaster risk plans to NCCR for review.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

Spatial Planning

For spatial planning, the NAP identified four strategic objectives, six adaptive measures, and 15 outputs. The leading agencies for this sector are the Ministry of Spatial Planning and Environment, the Ministry of Public Works, and the National Planning Office Suriname. Based on the identified KPIs as outlined in the NAP, some progress has been made in the spatial planning sector. The draft Law on Spatial Planning and its land-use planning standards and guidelines include all the aspects of the strategic objectives of this sector.

The key barriers and challenges for the spatial planning sector are:

- Lack of qualified personnel within relevant government institutions that issue permits and enforce regulations. Training of personnel is needed. Coordination is lacking between the spatial planning departments and units within the different ministries.
- Government personnel are unmotivated due to low salaries.
- At the Anton de Kom University of Suriname (AdeKUS), general courses related to spatial planning are provided, but they do not go into detail in the fields of study of the Faculty of Technical Sciences, e.g., forest and land-use systems (Agricultural Production and Forestry), spatial planning and environment (Environmental Sciences), and spatial planning and spatial reorganization (Infrastructure).

Table 10 provides an overview of progress made with regard to the implementation of the adaptive measures to date (2020–2024) in the spatial planning sector. The status indicates whether the adaptive measures have been completed, are ongoing, or have not started, or if their status is unclear due to a lack of information.

Source: Ministry of Spatial Planning and Environment.

Table 10. Progress in implementation of adaptive measures under strategic objectives for the spatial planning sector

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Conduct mapping of land titles across the total surface area of Suriname	Mapping that includes vulnerability of land under various uses to climate change impacts, hazard, and vulnerability mapping of land conditions	Digital maps updated: ongoing	The Management Institute for land registration and Land Information System keeps and maintains the parcel administration and also maintains all other information that is part of the digital GLIS system. Vulnerable areas, such as Multi Use Management Areas, are mapped. The draft Law on Spatial Planning includes a vision for spatial planning that encourages the development of regional maps to show vulnerable areas that need to be protected.
	Awareness campaign about land title holders' rights and responsibilities as they relate to climate change impacts and adaptation	Number of properties climate proofed: ongoing	In 2021–2022 the community could participate in an online survey to give their views on changes they would like to see in their neighbourhood (such as what facilities would they want nearby). This input was useful to develop and further improve the country's policy on spatial planning. Meetings were held with representatives from various ministries, District Commissioners, and organizations (total of 17 workshops) to provide input toward the vision for development of land and preparation of the draft Law on Spatial Planning. In September 2024, consultation sessions regarding land-use planning standards and guidelines were organized with the ministries of Public Works, Ministry of Land Policy and Forest Management, LVV, Ministry of Health, and MINOWC.
Review the current legal framework for spatial planning	Planning Act 1973, Urban Planning Act 1972, and the Decree on Issuance of Domain land considered for revisions to incorporate potential climate change impacts into future spatial planning legislation	Legislation updated (climate proofing): ongoing	The draft Law on Spatial Planning, the land-use planning standards and guidelines, and the vision on land-use planning and land-use planning standards include climate-proofing revisions and consider climate adaptation and placement of critical infrastructure in less vulnerable areas.
		Legislation updated (consider climate adaptation): ongoing	
		No KPI: unclear	Note: No KPI is identified for the NAP output "Ensure that spatial planning geared towards moving critical infrastructure to higher ground is incorporated into the health sector, disaster response and other sectors."

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
Implement land-use planning through the creation of a single land-use authority	Implement land-use planning through the creation of a single land-use authority that considers vulnerability, land availability and location, and the suitability of land for industrial, agricultural, or human settlement purposes	Zoning implemented: ongoing	The vision for spatial planning was formulated in 2022 through consultation sessions with stakeholders by ROM. Preconditions for spatial planning were formulated by ROM. Autoriteit Ruimtelijke Inrichting Suriname will be set up with the approval of the Law on Spatial Planning.
		Land allocation policy implemented: ongoing	Land allocation is included in the draft Law on Spatial Planning and its land-use planning standards and guidelines.
		Drainage Plan requirements implemented: ongoing	Drainage Plan requirements are included in the land-use planning standards and guidelines.
		Paramaribo Master Plan implemented: ongoing	A Master Plan of Greater Paramaribo to integrate climate change considerations has been finalized, which will be executed together with the Saramacca Canal update project. Consultations were held on October 24, 2024.
		Land Tenure System implemented: ongoing	1. Draft Law on collective rights of Indigenous and Tribal People was submitted in 2021 for approval in Parliament. 2. In 2023, the Government of Suriname introduced the measure that land tenants could convert domain land up to 2,500 m^2 to full ownership. 3. The draft Law on Spatial Planning includes land allocation, land-use planning standards and guidelines, and a vision on land-use planning and land-use planning standards.
		Agro-Ecosystem Zoning implemented: unclear	No information available.
Regulate activities such as sand and shell mining and	Establish protected area and buffer zone along the	Increased protected area acreage: ongoing	The Greening Transportation Infrastructure Development Integrated Program

Strategic objective	Adaptive measure	KPI & status (completed, ongoing, not started, unclear)	Highlights to date
the issuance of land rights in the estuarine zone	coastline and along other water bodies such as rivers and lakes		(GRID-IP)[14] is being implemented by ROM and WWF with funding from the GEF.The GRID-IP will assess how the estuarine zone can be protected from the impacts of the upcoming oil and gas industry and development of agriculture and housing projects in the coastal area. Buffer zones will be broadened (F. Wesenhagen, personal communication, September 24, 2024).
		New regulations implemented: ongoing	GDS is focused on implementation of adaptation measures, taking into account placement of economic zones and how to make sustainable and strategic use of the available land. GDS was finalized in February 2025.
		New regulations implemented: ongoing	Protected areas and buffer zones are included in the draft Law on Spatial Planning, the GRID-IP, and GDS.
	Forbid new development initiatives in vulnerable zones and gradually reduce existing activities in vulnerable zones and in potential future buffer zones	Increased area under rejuvenation: ongoing	Protection of high-risk areas is included in the draft Law on Spatial Planning, the land-use planning standards and guidelines, and a vision on land-use planning and land-use planning standards.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, validation workshop conducted in October 2024, and other sources cited in the table.

[14] "Under the GRID-IP, the project Preserving Suriname's Immense Marine and Coastal Biodiversity Through Greening Infrastructure Development aims to support upstream measures—including policies, planning processes, and guidelines—so that upcoming transportation infrastructure in Suriname is done in a way that maintains or even enhances the natural environment" (WWF, n.d.).

4.0 Conclusions and Recommendations

Suriname is well on its way in implementing its NAP. However, progress in implementation is not uniform across the levels and sectors covered by the NAP. At the strategic level, the most progress has been made in the strategic outcomes relating to "Institutional arrangements, policies and capacities able to lead and coordinate national and sub-national climate change adaptation (1)" and "Data and information collection systems to fully support national and sub-national climate change impacts, vulnerability and adaptation decision-making (2)." The least progress has been made in the strategic outcomes on "Integration and institutionalization of climate change adaptation in broader Surinamese economic development policies, plans and programmes (3)" and "National technical capacity that is fully trained and skilled at leading and implementing Suriname's climate change adaptation actions (4)." At the sectoral level, the most progress has been made in the forestry, environment, and spatial planning sectors. Key barriers and challenges that have impacted implementation in the various sectors are lack of awareness of the NAP, lack of qualified personnel, lack of financial resources, the fact that institutions' activities are mostly project based and not sustainable, lack of engagement with local communities, and a lack of mainstreaming of adaptation in the national budget. Key needs identified across multiple sectors include financial resources, equipment, training, and additional and specialized staff. An overview of the specific needs identified by stakeholders is provided in Appendix F.

The majority of the stakeholders who participated in the focus group meetings, online questionnaire, and interviews were not aware of the NAP and the relevant adaptive measures for their sector or work area. The NAP was finalized in 2019 and was not submitted to Parliament for approval. No awareness-raising activities have been identified in which the final NAP has been presented to stakeholders. After its development, the NAP's follow-up activities were initiated in 2022 by the ROM. Despite not being formally assigned this role, ROM has since taken the lead in the implementation of the NAP. These may be some of the reasons why most of the stakeholders were not aware of the NAP. It is therefore recommended that the Government of Suriname decides whether or not ROM will continue to lead the implementation of the NAP, as opposed to the NMA, to which this role was originally assigned. To support NAP implementation once the leadership and awareness issues are addressed, the Government of Suriname should also consider attracting more and more qualified employees and providing them with incentives.

It is noteworthy that a lot of the ministries and organizations are already collaborating with each other on various projects, as described in relation to progress made at the sectoral level. There is also good participation of women, local communities, and representatives from the Indigenous and Tribal People in workshops, training, and monitoring activities. However, this participation generally does not extend to the involvement or integration of these groups in decision-making processes. This issue was also highlighted by stakeholders during the focus group meetings held during the development of this NAP Progress Report. Engagement of Indigenous and Tribal People in the various stages of the NAP process could be enhanced to ensure that NAP implementation is better aligned with Indigenous decision-making processes, which require additional time, as the various tribal communities need to review and approve any agreement, proposal, manual, guideline, or other document.

This progress report has its limitations. During this assignment, it was occasionally challenging to obtain information regarding progress made on particular strategic objectives or as measured against specific KPIs. In these cases, details regarding activities or initiatives that are relevant to these objectives are included in the report where possible. Where information was not available or could not be validated due to missing KPIs, the progress of implementation was categorized as unclear. The assessment of progress also should have identified priorities for action and funding. For most of the sectors, the stakeholders consulted did not feel that additional adaptive measures were needed. However, for the health and spatial planning sectors, stakeholders expressed a view that some existing adaptive measures should be adjusted and that additional adaptive measures were required. Unfortunately, no additional information was provided during this assessment on what these measures should be for the health sector. For the spatial planning sector, regarding the NAP adaptive measure "*Planning Act 1973, Urban Planning Act 1972, and the Decree on Issuance of Domain Land* considered for revisions to incorporate potential climate change impacts into future spatial planning legislation," it was proposed to add the words "Law on Spatial Planning implemented." In November 2024, the draft Law on Spatial Planning was submitted to Parliament for approval. Every adaptive measure listed for the spatial planning sector in the NAP will be covered by this law.

In order to better identify priority areas other than those already outlined in the NAP, the ministry or government body responsible for the coordination of NAP implementation (ROM or NMA) will need to organize sessions with the various stakeholders. The sessions can be used to inform the stakeholders of what is included in the NAP for each sector and what their role is or can be in the implementation of the adaptive measures, and to determine if their priorities have changed. With the stakeholder sessions, the M&E framework can also be reviewed and amended to ensure that the strategic objectives, adaptive measures, indicative outputs, and KPIs are well aligned.

The second-phase sectors (infrastructure, housing, tourism, and mining) did not include an achievement schedule and associated KPIs. This makes it difficult to evaluate the progress made within these sectors. Some KPIs are also missing for the first-phase and crosscutting sectors, which makes it difficult to monitor the progress of implementation. In such contexts, stakeholders can be consulted to identify KPIs that are realistic, measurable, and achievable. The Environmental Framework Act enables the NMA to request information from stakeholders that can contribute to the preparation of national reporting. It is advised that ROM and the NMA collaborate closely to obtain relevant information to monitor the progress of NAP implementation. The climate database, DONDRU, has a monitoring, reporting, and verification tool and can be used to collect information from relevant ministries and institutions on adaptation activities and projects that are ongoing or have been completed, or to submit relevant climate-related documents that have been finalized. As mentioned earlier in this report, the most recent data on the DONDRU database is from 2020. It is recommended that the information on DONDRU should be regularly updated.

Specific recommendations expressed by stakeholders on the various sectors are outlined in Table 11.

Table 11. Recommendations by sector

Sector	Recommendations
Water	• Add to NAP strategic objective "Comprehensive national research programme on social, environmental and economic baselines, climate science, vulnerability, impacts and risk management" the adaptive measure "Engagement of stakeholders." • Add to NAP strategic objective "Climate-resilient infrastructure development to ensure availability of drinking water and other uses of water" the adaptive measure "Utilize climate models to predict future changes to the climate to anticipate the effects [with the caveat that climate projections are associated with significant uncertainty]."
Forests	• Implement the National Mangrove Strategy and establish a program for mangrove conservation, reforestation, and afforestation. • Amazon Conservation Team and Tropenbos International Suriname can enhance the engagement of local communities in forest monitoring. This can also be replicated as a best practice. • Institutional strengthening on the highest (minister) level is needed to have a helicopter view of what is taking place with our forests. • Better coordination is needed between activities of the NDC and NAP. A monitoring unit is needed for implementation of the NAP, NDC, etc. • A survey should be conducted to determine if the public awareness is enhanced for the NAP strategic objective "Awareness raising and capacity building program on sustainable forest management, forest carbon accounting, and forest carbon monitoring." • Amend the NAP indicative output "A State Order for the protection of **all forests** and in particular mangrove forests is developed" to "A State Order for the protection of forests and in particular mangrove forests is developed." The current indicative output says that all forests are protected and therefore no activities can take place. Also, instead of a State Order, an option could be to submit a Ministerial Order, which can more easily be approved by Parliament. • The stakeholders proposed to amend the KPI for the NAP adaptive measure "Assess options to access climate finance through UNFCCC mechanisms and other related funding avenues financing carbon sequestration by forest and sustainable forest" to increase access to carbon credits. • Develop KPIs for the NAP strategic objective "Comprehensive national research program on social, environmental and economic baselines, climate science, vulnerability, impacts and risk management" related to economic and social aspects, vulnerability, etc.
Agriculture	• Proposed KPI for the NAP adaptive measure "Strengthen participation in agricultural activities particularly among women and vulnerable groups" and the related indicative output "The livelihoods of women farmers and other vulnerable groups are strengthened through training and supported through female-headed household-specific financing, resource sharing and ownership and network support" is "Number of women trained in agricultural practices, project writing, and marketing of their products." • Proposed KPI for the NAP adaptive measure "Focus on community-specific and local-specific awareness and training" with indicative output "Increased local-level capacity on how to manage impacts based on research results" is "Number of local communities with climate-smart agricultural practices." • Adjust the wording in the NAP indicative output "Mandated infrastructure development to conserve water, provide irrigation or fast drainage and protect agriculture from saltwater intrusion" to "Mandatory infrastructure development to conserve water, provide irrigation or fast drainage, and protect agriculture from saltwater intrusion."

Sector	Recommendations
	• Proposed KPI for the NAP adaptive measure "Implement the Water Boards Act as the most relevant legislation for water management in the agricultural sector and strengthen the governance in water management for agriculture" with indicative output "Local water management bodies established and operational" is "Water management bodies established."
Education	• During the discussions, it was suggested that the Government of Suriname work with local people to identify new locations for schools, in order to lower barriers to children attending those schools. • The Government of Suriname needs to take into consideration the impacts of climate change and sea level rise on school infrastructure. • Extend climate awareness programs to elementary and high schools, focusing on enhancing knowledge about adaptation and mitigation.
Health	• A vulnerability and adaptation assessment of the sector should be undertaken. • Smart hospital initiatives for climate-smart health care facilities should be adopted. • Update the surveillance manual and notifiable diseases law. • Access more support from the private sector for BOG to be able to regularize health care capacity. • Create an integrated surveillance system for epidemiology, environmental health, entomology, and meteorology data to facilitate mapping of diseases related to climate change. • Assess the national surveillance system, which includes environmental health surveillance, to identify any areas that need surveillance and any gaps in the system. • Develop a Health National Adaptation Plan. • Conduct quarterly reporting and coordination of the implementation of NAP activities.
DRR	• Allocate funds in the National Budget. • Inform the public about the existing disaster risk plans. • Establish a meteorological division within NCCR to work more efficiently and regularly develop their own disaster simulations. • Raise awareness of the District Councils, Resort Councils, traditional authorities, and schools. • Develop a disaster awareness plan for schools.
Spatial planning	• Set up a coordination mechanism that will connect the spatial planning departments and units within the various ministries. Most ministries already have a spatial planning department in their structure. • Provide personnel with incentives to get them motivated. • Improve the spatial planning courses already offered in the various study programs at AdeKUS to include climate change implications. Additionally, include spatial planning in the curriculum at the tertiary education level.

Sources: Government of Suriname (2019), stakeholder interviews, focus group meetings conducted in September–October 2024, and validation workshop conducted in October 2024.

This progress report has attempted to provide as comprehensive a picture as possible of the current status of Suriname's NAP implementation. However, some gaps remain due to the lack of information relating to certain adaptation measures and the lack of availability of some stakeholders. It is therefore recommended that the Government of Suriname consider updating this progress report within the next year or two to address these gaps and provide an update on the implementation progress. Regular updates of the progress report (e.g., every 2 years) might also be considered to track NAP implementation progress, inform domestic adaptation policy, and support Suriname's global adaptation reporting activities.

Stakeholders expressed the need to update the NAP, as they found that the strategic objectives did not always align with the adaptive measures, outputs, and KPIs. Also, missing KPIs could then be added to the updated NAP. The Government of Suriname was also planning on updating the NCCPSAP, which may have implications for the NAP. It is therefore recommended that the Government of Suriname consider updating the NAP to reflect these changing priorities, even though the NAP is set to run until 2029.

During the proposed stakeholder engagement sessions, as mentioned above, stakeholders can also determine whether the strategic objectives are still priorities to be met. The timing of such sessions should take account of the fact that National Elections will take place in May 2025. A change in government could result in a change in national priorities.

It is of utmost importance that the updated NAP and NCCPSAP are submitted to Parliament for approval. This will guarantee that the relevant ministries and institutions will consider integrating the adaptive measures in their (project) activities. Relevant stakeholders should be continuously informed and engaged by the NAP coordinating body. A possible option is to use the Working Group or Committee on Climate Change that ROM is preparing to establish. Focal points can then be established at the various ministries to facilitate the collection and sharing of relevant data to improve future national reporting.

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Appendix A. List of Documents Reviewed

Table A1. Documents consulted

Title	Type of document	Language	Location
National Adaptation Plan	Hard copy and digital	English	https://unfccc.int/sites/default/files/resource/NAP-Suriname-2020.pdf
Third National Communication	Hard copy and digital	English	https://unfccc.int/sites/default/files/resource/SURINAME%20NC3_2023_FINAL.pdf
Suriname water Sectoral Adaptation Strategy and Action Plan	Hard copy and digital	English	https://napglobalnetwork.org/wp-content/uploads/2022/04/napgn-en-2022-suriname-sasap.pdf
Environmental Framework Act	Digital	Dutch	https://www.dna.sr/wetgeving/surinaamse-wetten/wetten-na-2005/milieu-raamwet/
Development Plan (2017–2021)	Digital	English	https://www.planningofficesuriname.com/wp-content/uploads/2018/02/2017-2021-DEVELOPMENT-PLAN.pdf
Multi-Annual Development Plan (2022–2026)	Digital	Dutch	https://www.planningofficesuriname.com/wp-content/uploads/2022/10/MOP-2022-2026-Volledig-FINAL-DNA-approved-Engels.pdf
Policy Note Ministry of Spatial Planning and Environment	Digital	Dutch	Ministry of Spatial Planning and Environment, Directorate for Environment
State of the Climate Report	Digital	English	https://publications.iadb.org/en/state-climate-report-suriname#:~:text=The%20State%20of%20the%20Climate%20Report%20provides%20essential%20inputs%20for,%2Dto%2Dday%20government%20operations.
Suriname Climate Risk and Vulnerability Assessment Report	Digital	English	https://www.dondru.sr/media/1049/final-risk-and-vulnerability-report-with-cover.pdf
Suriname Nationally Determined Contribution 2020	Digital	English	https://unfccc.int/sites/default/files/NDC/2022-06/Suriname%20Second%20NDC.pdf

Title	Type of document	Language	Location
Albania National Adaptation Plan	Digital	English	https://napglobalnetwork.org/resource/albania-nap-progress-report/
St. Lucia National Adaptation Plan	Digital	English	https://napglobalnetwork.org/resource/saint-lucia-nap-progress-report/
Gender Action Plan 2019–2020	Digital	English	https://gov.sr/wp-content/uploads/2022/03/3-juli-engelse-printversie-genderactieplan-2019-2020-1.pdf
Reporting on Progress in National Adaptation Plan Processes	Digital	English	https://napglobalnetwork.org/wp-content/uploads/2023/09/napgn-en-2023-reporting-on-progress-in-nap-processes.pdf
National Adaptation Plans: Technical guidelines for National Adaptation Plan process	Digital	English	https://unfccc.int/files/adaptation/cancun_adaptation_framework/national_adaptation_plans/application/pdf/naptechguidelines_eng_low_res.pdf
Toolkit for monitoring, evaluation, and learning for National Adaptation Plan processes	Digital	English	https://napglobalnetwork.org/resource/toolkit-monitoring-evaluation-learning-nap-processes/
National Mangrove Strategy	Digital	English	https://www.discover-suriname.com/downloads/mangrove=strategy-suriname.pdf
Technical Needs Assessment Report	Digital	English	https://tech-action.unepccc.org/wp-content/uploads/sites/2/2020/09/tna-report-suriname.pdf
Strategic Action Program Regional Strategy for Integrated Water Resources Management in the Amazon Basin	Digital	English	https://otca.org/en/wp-content/uploads/2021/01/Strategic-Action-Program-SAP.pdf
Wet van 21 mei 2024, houdende wijziging van de Milieu Raamwet(S.B. 2020 no. 97)	Digital	Dutch	https://www.dna.sr/media/405371/S.B._2024_no._56__Wet_van_21_mei_2024__houdende_wijziging_van_de_Milieu_Raamwet__S.B._2020_no._97_..pdf

Source: Compiled by P. Karijodrono.

Appendix B. Questionnaire for Suriname's National Adaptation Plan Progress Report

Full name:

Name organization:

Position/title:

Sector:

Email address:

Telephone number:

A. Engagement in national adaptation plan (NAP) process

1. Were you involved in developing the Suriname NAP (2019–2029)?
2. Were you involved in implementing the NAP for your sector or area of work between 2020 and 2024? If so, which specific adaptation measures were implemented as outlined in the NAP?

B. Progress implementation of NAP

1. Please describe any significant achievements in your sector or work area from the past 4 years. Specific examples, data, and available documents would be helpful.
2. What activities have been completed since the development of the NAP?
3. How is progress in implementing adaptation actions measured in your specific sector?

C. Monitoring and evaluation of NAP implementation

1. What indicators are you using to track progress?
2. Are you able to provide any specific data or metrics related to your sector?

D. Challenges and barriers

1. What are the main challenges you have encountered in implementing the NAP?
2. How have these challenges affected progress in your sector or area of work?
3. What steps have been taken to address these challenges?

E. Financing adaptation activities

1. What funding sources have supported your adaptation activities?
2. Is there a dedicated budget available within your organization to implement adaptation activities? If yes, how has the budget been allocated in your sector?
3. Are there any financial gaps in the funding sources for adaptation activities or are resource needs?

F. Stakeholder engagement

1. How have stakeholders been involved in your adaptation activities?
2. What efforts have been made to build capacity among stakeholders?
3. Can you provide examples of successful stakeholder engagement?

G. Lessons learned

1. What are the key lessons learned from your activities?
2. What factors have contributed to successful outcomes?
3. What areas need improvement?

H. Updating NAP actions

1. If the NAP would be updated, are there any adaptation actions and respective objectives, or outcomes you would like to add?
2. Based on your experience with implementing the NAP, what strategy would you use to improve its implementation?

Prepared by: P. Karijodrono.

Appendix C. Agenda and Registration Lists for Focus Group Meetings

Dates: September 3–4, 2024

Location: Ministry of Spatial Planning and Environment, Prins Hendrikstraat 22

Time: 09.00–15.00h

Objective: to share experiences about progress made in implementing adaptation measures and exchange ideas for the NAP update.

Time	Activity
08.30–09.00	Registration
09.00–09.05	Welcome and opening remarks
09.05–09.15	Presentation: Overview of the National Adaptation Plan
09.15–09.25	Presentation: National Adaptation Plan Progress Report
09.25–10.40	Group discussions: implementation of adaptation measures, capacity building, barriers/challenges encountered, lessons learned, and needs
10.40–11.00	Group presentation, feedback, and questions
11.00–11.10	Coffee break
11.10–12.25	Group discussion: stakeholder engagement and collaboration
12.25–13.25	Lunch
13.25–13.40	Group presentation, feedback, and questions
13.40–14.40	Group discussion: Analysis and prioritization areas of the NAP
14.40–14.55	Group presentation, feedback, and questions
14.55–15.00	Next steps and closing remarks

The registration lists in Tables C1 and C2 provide an overview of the stakeholders that participated in the focus group meetings organized on September 3 and 4, 2024.

Table 12. Registration list for focus group meeting September 3, 2024

Name	Organization
Alimoestar, Shiffion	Ministry of Home Affairs – Bureau of Gender Affairs
Cheuk-Alam, Stephanie	Ministry of Health – Bureau of Public Health
Dipowirono, Vijona	Ministry of Spatial Planning and Environment
Djosetro, Marijem	Anton de Kom University of Suriname – Environmental Sciences
Malone, Haidy	United Nations Development Programme
Nagessar, Chander	Ministry of Education, Science and Culture
Noersalim, Sathyam	Association of Indigenous Village Leaders in Suriname
Patterzon, Ivette	Ministry of Spatial Planning and Environment
Pique, Patrick	Ministry of Natural Resources
Ridaie, Nazia	Green Heritage Fund Suriname
Satnarain, Usha	Anton de Kom University of Suriname
Simson, Renatha	Collaboration of Tribal People in Suriname consisting of the Kwinti, Aluku, Matawai, Paamaka, Okanisi, and Saamaka
Towikromo, Yvonne	Ministry of Home Affairs – Bureau of Gender Affairs

Source: Focus group meetings conducted on September 3, 2024.

Table 13. Registration list for focus group meeting September 4, 2024

Name	Organization
Artist, Josee	Association of Indigenous Village Leaders in Suriname
Bhairo, Lalita	Commissariat of Saramacca
Chotkan, Jeetendra	Ministry of Spatial Planning and Environment
Debisarun, Rakesh	Ministry of Land Policy and Forest Management
Dipowirono, Vijona	Ministry of Spatial Planning and Environment
Fernandes, M.	Commissariat of Commewijne
Haarloo, Jamille	Center for Agricultural Research in Suriname
Malone, Haidy	United Nations Development Programme
Parsadi, Niraj	Ministry of Agriculture, Livestock, and Fisheries
Patterzon, Ivette	Ministry of Spatial Planning and Environment
Sairras, Clarence	National Planning Office Suriname
Sardjoe, Ashand	Commissariat of Wanica Noord-West
Simson, Renatha	Collaboration of Tribal People in Suriname consisting of the Kwinti, Aluku, Matawai, Paamaka, Okanisi, and Saamaka
Somopawiro, Rene	Foundation for Forest Management and Production Control
Taweroe, Glenn	National Coordination Center for Disaster Management
Telgt, Joan	Mangrove Forum
Warsodikromo, Truus	Ministry of Public Works – Meteorological Services Suriname
Wirabangsa, Xaviera	Ministry of Finance
Wortel, Virginia	Center for Agricultural Research in Suriname

Source: Focus group meetings conducted on September 4, 2024.

Appendix D. Overview of Interviews Conducted

Table D1. Interviews conducted

Name	Organization	Function	Date of interview
Dipowirono, Vijona	Ministry of Spatial Planning and Environment	Environmental Policy Officer	September 25
Kromodimedjo, Angela	Foundation for Forest Management and Production Control	Project Coordinator	August 30
Landbrug, Janet	Foundation for Forest Management and Production Control	Deputy Director Research and Development	August 30
Paloeng, Consuela	Foundation for Forest Management and Production Control	Forest Carbon Specialist	August 30
Patterzon, Ivette	Ministry of Spatial Planning and Environment	Deputy Director Climate Change	August 19
Sairras, Clarence	National Planning Office Suriname	Head of Department	September 10
Towikromo, Yvonne	Ministry of Home Affairs – Bureau of Gender Affairs	Policy Advisor	August 28
Warsodikromo, Truus	Ministry of Public Works – Meteorological Services Suriname	Policy Advisor	September 12
Wesenhagen, Femia	Ministry of Spatial Planning and Environment	Spatial Planning Policy Officer	September 24

Source: Stakeholder interviews conducted in August–September 2024.

Appendix E. Registration List for Validation Workshop, October 11, 2024

Table E1. Registration list for validation workshop

Name	Organization
Adang, Jurmen	Ministry of Spatial Planning and Environment
Alimoestar, Shiffion	Ministry of Home Affairs – Bureau of Gender Affairs
Ardjosoediro, Iris	Suriname Water Company
Becker, Geneva	National Environmental Authority
Cheuk-Alam, Stephanie	Ministry of Health – Bureau of Public Health
Chotkan, Jeetendra	Ministry of Spatial Planning and Environment
Dasai, Marciano	Ministry of Spatial Planning and Environment
Dipowirono, Vijona	Ministry of Spatial Planning and Environment
Gompers, Marci	Ministry of Spatial Planning and Environment
Graanoogst, Faye	Energy Company Suriname
Kago, Lydia	Commissariat of Nickerie
Kosso, Frits	Ministry of Public Works – Hydraulic Research Department
Lachman, Anuradha	Energy Authority Suriname
Malone, Haidy	United Nations Development Programme
Modiwirijo, Sjyreen	Ministry of Spatial Planning and Environment
Nasio, Don	Ministry of Spatial Planning and Environment
Patterzon, Ivette	Ministry of Spatial Planning and Environment
Parsadi, Niradj	Ministry of Agriculture, Livestock and Fisheries
Pavion, H.	Ministry of Regional Development and Sport
Plein, L.	Ministry of Regional Development and Sport
Ridaie, Nazia	Green Heritage Fund Suriname
Van Ritter, J.	Commissariat of New Amsterdam
Samoender, Iwan	Ministry of Agriculture, Livestock and Fisheries
Samsoedien, P.	Ministry of Education, Science and Culture
Sardjoe, A.	Commissariat of North West
Sastrowitomo, Emily	Student Anton deKom University of Suriname
Simson, Renate	Collaboration of Tribal People in Suriname consisting of the Kwinti, Aluku,

Name	Organization
	Matawai, Paamaka, Okanisi and Saamaka
Sultan, Sima	Ministry of Finance
Towikromo, Yvonne	Ministry of Home Affairs - Bureau Gender Affairs
Westerlow, Sharon	Ministry of Regional Development and Sport
Wilnis, Faizel	Inter-American Institute for Cooperation on Agriculture
Wortel, Verginia	Center for Agricultural Research in Suriname
Zeeuw, A.	Ministry of Natural Resources

Source: Validation workshop conducted on October 11, 2024.

Appendix F. Overview of Specific Needs of Stakeholders

Table F1. Specific needs of stakeholders

Organization	Needs
General Bureau of Statistics	• Hardware (PCs). • Server for a database of environmental statistics.
Bureau of Public Health	• Technical and human capacity. • Equipment for monitoring diseases and sample taking. • Transportation. • A dedicated budget for climate change and health. • Capacity building for environmental health monitoring.
Meteorological Services Suriname	• Qualified personnel: five academics for climate, forecasting, and research. • Better salary for personnel.
Foundation for Forest Management and Production Control	• GPS. • Trackers. • Transportation. • Analysis of data for research. • Maintenance of received resources and equipment from projects.
National Planning Office Suriname	• Digitalization of hard-copy data (also maps, aerial photographs, etc.). • Collection of data up to the resort level. • Setup of a Spatial and Environmental Information System (database) to support the integration of national and sub-national climate change impacts, vulnerability, and adaptation in the preparation of both National Development and Regional Development Programs in accordance with the Planning Act. • Development of indicators necessary for the setup of zoning plans and Regional Development Programs. • Maintenance and visualization of the structural characteristics of the resorts and districts. • Intermediate and advanced training techniques in the use and application of real-time satellite imagery. This data is a valuable source of information for climate change action. • Training in: ○ collecting and analyzing spatial, environmental, and socio-economic data up to the grassroots level and processing this information in the Spatial and Environmental Information System (database) for both the Environmental Planning and Spatial Planning Department. ○ developing District-level (Flood) Risk Maps in close collaboration with the Meteorological Service, Hydraulic Department, and the NCCR. ○ modern techniques and methods for preparing long-term, strategic National and Regional Development Programs and to embed climate change in National and

Organization	Needs
	Regional Development Programs. ○ climate change impact on community development. ○ land-use regulation. ○ advanced GIS. ○ linking climate change to demographic, health, and transportation planning.

Source: Compiled from stakeholder interviews conducted in August–September 2024 and validation workshop conducted in October 2024.

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